



FIRST QUARTER 2006

GROUNDWATER MONITORING REPORT

Sampled on January 24, 2006

Job # SP-165

LOP # 1TDN059

Crescent Shell
890 L Street
Crescent City, California 95531

April 25, 2006

This *Quarterly Groundwater Monitoring Report* was prepared by SounPacific Environmental Services (SounPacific) staff for Big Oil & Tire Co. (BO&T). This report documents the results of the First Quarter 2006 sampling event of the Site's groundwater monitoring wells. This report includes data from previous studies that were conducted by Clearwater Group, Inc. (CGI) and a review of relevant files at Del Norte County Department of Environmental Health (DNCDEH). The station is located at 890 L Street, Crescent City, California (Figure 1).

SITE DESCRIPTION

Crescent Shell (the Site) is located in downtown, at the corner of Ninth and L Streets in Crescent City, California. L Street is used as the southbound lane of U.S. Highway 101. The lot remains vacant while the owner continues to investigate the lateral and vertical extent of contamination. Drainage is controlled by culverts that flow towards the ocean. Sewer and water services are supplied by public utilities (Figure 2).

SITE TOPOGRAPHY AND LAND USE

SounPacific understands that BO&T currently owns the property. The Site is a vacant lot. The Site topography is relatively flat with the surrounding topography consisting of terrain that descends in an east to southeasterly direction (Figure 1). The surrounding vicinity includes a collection of commercial and residential properties. Skagg Auto Repair lies adjacent to the southwest property line. Various residential properties border the southeastern side of the Site, and L Street and Ninth Street run along the northwest and northeast sides of the property, respectively. The former Crescent Shell site is located within one (1) mile of the Pacific Ocean as shown on Figure 1. A review of county records indicated that there is an ongoing investigation directly to the northeast of the Site across L Street.

SITE HISTORY

Previous studies from SounPacific and Clearwater Group, Inc. (CGI) indicated the following historical information:

1995 Preliminary Site Assessment (by Patric Lassiter)

On March 22, 1995, two (2) soil borings (B-1 and B-2) were drilled in order to complete a preliminary site assessment of the Crescent Shell site (Figure 3). Soil and groundwater samples were collected from both borings. Laboratory analytical reported elevated levels of Total Petroleum Hydrocarbons as gasoline (TPHg), benzene, toluene, xylenes, and ethylbenzene (BTXE), and TPH as diesel (TPHd) in both groundwater samples (Tables 1 and 2). In a letter dated December 22, 1995, the California Regional Water Quality Control Board, North Coast Region (NCRWQCB), requested that a work plan be prepared for further soil and groundwater investigation at the Site.

1995 UST Removal (Beacom)

On April 21, 1995, Beacom Construction of Fortuna, California (Beacom), removed one 550-gallon waste oil UST and one 1,000-gallon heating oil UST. Six (6) soil samples were collected from the excavation sidewalls and one (1) groundwater sample was collected from the

excavation pit (Tables 1 and 2). TPHd and TPH were reported at levels just above the reporting limits in a sample from the heating oil UST pit.

1997 Subsurface Investigation (CGI)

On September 29 and 30, 1997, CGI performed an investigation to define the lateral extent of the subsurface contamination. The investigation consisted of drilling eight (8) soil borings (B-3 through B-10) and installing three (3) monitoring wells (MW-1 through MW-3) (Figure 3). Analysis of soil samples reported elevated levels of hydrocarbon contaminants in borings MW-1 and B-3, located adjacent to the USTs (Table 1). Hydrocarbon contamination was detected in all groundwater samples analyzed (Table 2). In a letter dated April 28, 1998, the NCRWQCB requested a work plan for the installation of additional soil borings and monitoring wells in order to further define the extent of contamination.

1997-1998 Groundwater Monitoring Program (CGI)

A groundwater monitoring program was initiated on October 10, 1997, and continued for a period of three (3) quarters. Groundwater samples from all monitoring wells (MW-1, MW-2, and MW-3) were collected and analyzed. This monitoring program was concluded on July 10, 1998, and results of the program are reported in the CGI *Quarterly Groundwater Sampling and Monitoring Report, Third Quarter 1998*, dated August 14, 1998.

2001 UST Removal (Beacom)

On January 10, 2001 Beacom removed three 5,000-gallon gasoline USTs and one 4,000-gallon gasoline UST from the Site. Monitoring well MW-3 was destroyed during the removal. Following these activities, no USTs remained onsite.

2001 Subsurface Investigation (SounPacific)

On April 2 and 3, 2001, SounPacific staff performed a subsurface investigation at the Crescent Shell site in accordance with the *Offsite Subsurface Investigation Workplan*, dated August 17, 1998 and the approved SounPacific *Workplan Addendum*, dated September 26, 2000. This investigation was specifically aimed at delineating the vertical and horizontal extent of the MTBE contamination, as requested by the NCRWQCB in a correspondence dated July 25, 2000.

The investigation consisted of drilling six (6) soil borings (B-11 through B-16) (Figure 3). Soil analytical results reported elevated levels of TPHg in borings B-14 and B-15, located adjacent to the previous dispenser islands (Table 1). Elevated levels of TPHg, BTXE, and TPHd were also detected in groundwater samples from these borings (Table 2).

At this time SounPacific recommended further investigation of the downgradient extent of the contamination and interim source removal activities. In a letter dated March 19, 2002, NCRWQCB concurred with the recommendations and requested a work plan, and requested that quarterly monitoring of the two (2) onsite monitoring wells (MW-1 and MW-2) be initiated. SounPacific incorporated wells MW-1 and MW-2 into a monitoring program on May 5, 2002.

2003 Subsurface Investigation (SounPacific)

On April 14 through 16, and April 22, 2003, SounPacific staff performed a subsurface investigation at the Crescent Shell site to determine the downgradient extent and source of the contamination. All investigative work was performed in accordance with the approved SounPacific *Subsurface Investigation Work Plan*, dated June 3, 2002. The investigation consisted of drilling six (6) offsite soil borings (B-18 to B-20 and B-25 to B-27) and five (5) onsite soil borings (B-17 and B-21 to B-24) (Figure 3). Borings B-24, B-25, B-26, and B-27 were converted to monitoring wells MW-7, MW-4, MW-5, and MW-6, respectively. Laboratory analysis of soil samples reported elevated concentrations of TPHg and BTXE in borings B-19 and B-26, which were located offsite on Highway 101, downgradient from the previous dispenser islands and USTs (Table 1). Laboratory analytical also reported elevated concentrations of TPHg and BTXE in groundwater samples from boring B-19. At this time, SounPacific recommended that a source delineation work plan be prepared. This work plan would include: additional borings in the vicinity of borings B-14 and B-15 to assess contaminant degradation over time; additional borings to the west, north, and south of boring B-15 to define the boundaries of the soil plume; and additional borings across Highway 101, downgradient from boring B-19, to assess the possible downgradient migration of the soil and groundwater plumes. The NCRWQCB concurred with these recommendations in a letter dated June 28, 2004.

2005 Subsurface Investigation (SounPacific)

During February 28, March 1, 4, & 13, and April 11, 2005, SounPacific staff performed a subsurface investigation at the Crescent Shell site to determine the down gradient extent and source of the contamination. All investigative work was performed in accordance with the approved SounPacific *Subsurface Investigation Workplan*, dated August 6, 2004. The investigation consisted of drilling three (3) offsite soil borings (B-33 through B-35) and five (5) onsite soil borings (B-28 through B-32) (Figure 3). Laboratory analytical reported elevated concentrations of TPHg in soil samples from boring B-29, which was in the vicinity of the previous boring B-15 (Table 1). In a four year period, these concentrations decreased by a factor of 10^3 . Elevated concentrations of TPHg were also detected in soil samples from boring B-30, located in the vicinity of the previous USTs. Elevated concentrations of TPHg were reported in groundwater samples from all borings, along with concentrations of BTXE and TPHd (Table 2). In a correspondence dated August 17, 2004, the NCRWQCB requested that one of the downgradient borings be converted to a monitoring well, based on soil and groundwater analytical results. Boring B-34 was converted to monitoring well MW-8. Based on the results of this investigation, SounPacific recommended further investigation to delineate the extent of the groundwater contamination downgradient of monitoring well MW-8. The NCRWQCB concurred with these recommendations and requested that a work plan be prepared.

RESULTS OF QUARTERLY SAMPLING

A groundwater monitoring program was implemented at the Site in May 2002 for wells MW-1 and MW-2, and expanded to MW-4, MW-5, MW-6, and MW-7 on April 22, 2003, following their installation. An additional monitoring well MW-8 was installed on March 4, 2005, and incorporated into the existing monitoring program. The program consists of recording water level data and collecting groundwater samples for laboratory analysis on a quarterly basis. Water level data is used to determine the groundwater gradient and average flow direction using standard three-point calculations. Analytical results from monitoring well groundwater samples during quarterly sampling events present hydrocarbon contamination levels in the groundwater beneath the Site. Monitoring wells were gauged and sampled on January 24, 2006.

FIELD DATA

Wells gauged: MW-1, MW-2, MW-4, MW-5, MW-6, MW-7 and MW-8

Groundwater: Depth ranged from 3.30 to 7.41 feet btoc (Table 3)
Elevation ranged from 30.47 to 33.48 feet above mean sea level (Table 3)

Floating product: Sheen detected in MW-1, MW-7, and MW-8

Flow Direction: ESE (Figure 4)

Groundwater gradient: 0.03 feet per foot (ft/ft) (Figure 4)

On January 24, 2006, the depth to groundwater in the Site's seven (7) monitoring wells ranged from 3.30 feet below top of casing (btoc) in well MW-1 to 7.41 feet btoc in MW-8. When corrected to mean sea level, water level elevations ranged from 30.47 feet above mean sea level (amsl) in MW-8 to 33.48 feet amsl in MW-1. Groundwater levels for the January 24, 2006 monitoring event, along with historical level and elevations are included in Table 4. Groundwater flow on January 24, 2006 was towards the east-southeast at a gradient of 0.03 feet per foot. The groundwater flow and gradient are graphically depicted in Figure 4. Prior to sampling, all wells were purged; the groundwater field parameters for each well are presented below.

MONITORING WELL MW-1 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm) ⁻¹
2:08 pm	0	6.83	57.09	0.554
2:13	1.6	6.80	58.42	0.568
2:17	3.2	6.80	58.55	0.578
2:22	4.8	6.80	58.53	0.578

MONITORING WELL MW-2 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm) ⁻¹
3:39 pm	0	6.11	58.38	0.317
3:43	1.3	6.36	59.27	0.258
3:47	2.6	6.38	59.27	0.257
3:52	3.9	6.39	59.35	0.262

MONITORING WELL MW-4 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm) ⁻¹
2:36 pm	0	6.48	59.78	0.183
2:44	2.3	6.42	60.98	0.186
2:49	4.6	6.40	61.03	0.188
2:53	6.9	6.30	60.80	0.187

MONITORING WELL MW-5 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm) ⁻¹
3:09 pm	0	6.39	59.09	0.162
3:16	2.1	6.34	59.94	0.171
3:20	4.2	6.34	60.07	0.178
3:24	6.3	6.32	60.13	0.183

MONITORING WELL MW-6 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm) ⁻¹
4:04 pm	0	5.77	56.32	0.079
4:13	1.9	5.69	56.75	0.106
4:20	3.8	5.71	56.77	0.107
4:28	5.7	5.71	56.84	0.021

MONITORING WELL MW-7 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm) ⁻¹
1:34 pm	0	6.12	54.66	0.154
1:39	2.4	6.17	55.52	0.166
1:45	4.8	6.20	56.00	0.173
1:49	7.2	6.20	55.82	0.163

MONITORING WELL MW-8 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm) ⁻¹
1:09 pm	0	6.24	58.40	0.229
1:14	1.1	6.43	58.09	0.284
1:17	2.2	6.33	58.03	0.262
1:20	3.3	6.36	58.14	0.296

ANALYTICAL RESULTS

Sampling locations: MW-1, MW-2, MW-4, MW-5, MW-6, MW-7 and MW-8
Analyses performed: TPHg, BTXE, MTBE, DIPE, TAME, ETBE, TBA, TPHd, TPHmo
Laboratories Used: Basic Labs, Redding, California (ELAP # 1677)

The analytical results for the current monitoring event are presented below and graphically depicted in Figure 5. The laboratory report is included as Appendix A. The historical analytical results for all monitoring wells, since the implementation of groundwater monitoring are included as Table 3.

	<u>MW-1</u>	<u>MW-2</u>	<u>MW-4</u>	<u>MW-5</u>	<u>MW-6</u>	<u>MW-7</u>	<u>MW-8</u>
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
TPHg:	6,110	190	ND < 50	ND < 50	ND < 50	ND < 50	2,400
Benzene:	5.8	ND < 0.5	ND < 0.5	1.8	ND < 0.5	ND < 0.5	80.3
Toluene:	ND < 4.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	2.4
Xylenes:	18.3	ND < 1.0	ND < 1.0	6.4	ND < 1.0	ND < 1.0	55.2
Ethylbenzene:	916	ND < 0.5	ND < 0.5	2.9	ND < 0.5	ND < 0.5	143
MTBE:	ND < 8.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0
DIPE:	ND < 4.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
TAME:	ND < 4.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
ETBE:	ND < 4.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
TBA:	ND < 400	ND < 50	ND < 50	ND < 50	ND < 50	ND < 50	ND < 50
TPHd:	2,930	ND < 50	ND < 50	ND < 50	ND < 50	ND < 50	1,010
TPHmo:	80	ND < 50	ND < 50	ND < 50	ND < 50	90	71

ND = non-detectable

COMMENTS AND RECOMMENDATIONS

On January 24, 2006, the First Quarter 2006 groundwater monitoring event for the three (3) onsite monitoring wells and four (4) offsite monitoring wells was conducted at the Crescent Shell at 890 L Street in Crescent City, California. A summary of the results are presented below.

- The depth to groundwater ranged between 3.30 feet btoc to 7.41 feet btoc. Groundwater flow was towards the east-southeast at a gradient of 0.03 feet per foot.
- Groundwater samples were collected and analyzed for TPHg, BTXE, five-fuel oxygenates, TPHd, and TPHmo. Laboratory results reported TPHg in three (3) of the seven (7) wells at concentrations ranging from 190 ppb (MW-2) to 6,110 ppb (MW-1). Benzene was reported in three (3) wells at concentrations ranging from 1.8 ppb (MW-5) to 80.3 ppb (MW-8). Toluene was reported in one (1) well at a concentration of 2.4 ppb (MW-8). Xylenes were reported in three (3) wells at concentrations ranging from 6.4 ppb (MW-5) to 55.2 ppb (MW-8). Ethylbenzene was reported in three (3) wells at concentrations ranging between 2.9 ppb (MW-5) and 916 ppb (MW-1). TPHd was reported in two (2) wells at concentrations of 1,010 ppb (MW-8) and 2,930 ppb (MW-1). TPHmo was reported in three (3) wells at concentrations ranging from 71 ppb (MW-8) to 90 ppb (MW-7). No other constituents were reported at or above laboratory detection limits.

Based upon these results the following observations and conclusions have been made.

- TPHg has consistently been reported in wells MW-1, MW-2, and MW-8 at fluctuating concentrations, with concentration during the recent sampling event significantly lower than those of the previous event. MW-5 had consistently reported TPHg until the latest sampling event. TPHg was reported once in wells MW-4 and MW-6 and twice in well MW-7 since the introduction of the groundwater monitoring (Figures 6 through 12).
- Benzene has been reported in MW-1 during 50% of the sampling events. In wells MW-2

and MW-5, benzene has been reported during the majority of the sampling events. Benzene has been detected in MW-8 during all four (4) monitoring events since its installation during the second quarter 2005. Benzene has never been reported at any other time in any wells.

- Toluene has been detected in MW-1, MW-2, and MW-5 during approximately 50 % of the well's sampling events. Toluene was reported in all the sampling events of MW-8 to date, since its installation in the second quarter 2005. Toluene has never been reported at any other time in any wells.
- Xylenes has been reported in MW-1 during all its sampling events, with the exception of the initial sampling event when elevated reported limits were used, and has been ever present in MW-8. Xylenes have been detected in MW-2 during 60% of the sampling events, and have been consistently detected in MW-5, except during the first quarter 2004. Xylenes have never been reported at any other time in any wells.
- Ethylbenzene has consistently been detected in wells MW-1, MW-2, MW-5, and MW-8 since the inception of the monitoring. Ethylbenzene was detected at levels slightly higher than the reporting limits, once in wells MW-6 and MW-7 during the fourth quarter 2004, and once in MW-4 during the second quarter 2005.
- The historical fluctuations of BTXE concentrations over time for all wells are shown in Figures 6 through 12.
- MTBE was reported for the first time in well MW-1 during the fourth quarter of 2002 and the fourth quarter of 2005. MTBE was detected for the first time in wells MW-2, MW-5, and MW-8, at concentrations in the range of 10^3 ppb during the fourth quarter of 2005. MTBE was reported once in well MW-4 (0.7 ppb) during the well installation sampling event. MTBE has never been reported at any other time in any wells.

- TAME was reported twice in wells MW-1, MW-2, and MW-5 during the last sampling event. In well MW-8, TAME was reported twice during the third and the fourth quarter of 2005. TAME has never been reported at any other time in any wells.
- TPHd has consistently been reported in well MW-1 since the inception of the monitoring, except during the first quarter of 2004. TPHd has also been consistently reported in well MW-2 since the inception of the sampling, except for the first quarter of 2004 and the first quarter of 2006. In wells MW-4, MW-6, and MW-7, TPHd was reported only once (second quarter 2005) since the inception of the monitoring. In well MW-5, TPHd was reported during the well installation sampling event and the second quarter of 2005. In well MW-8, TPHd has been reported consistently since the installation of the well. In wells MW-1, MW-2, and MW-8, TPHd concentrations have decreased significantly since the second quarter of 2005. The historical fluctuations of TPHd concentrations over time for all wells are shown in Figures 6 through 12.
- TPHmo was reported in well MW-1 during four (4) of the last sixteen sampling events. In MW-2, TPHmo was reported during three (3) of the last sixteen sampling events. TPHmo was detected for the second time in well MW-7, and the third time in well MW-8 during this quarter of sampling. In wells MW-4, MW-5, and MW-6, TPHmo was detected in each well only once during the second quarter 2005.

Based on the results of the January 2006 monitoring event and historical results, the following future activities are proposed.

- Since the inceptions of groundwater monitoring at the Site, petroleum hydrocarbons have generally been absent in wells MW-4, MW-5, and MW-7. Therefore, although it is proposed to continue groundwater monitoring, sampling and analysis of wells MW-4, MW-5, and MW-7 will be discontinued. Quarterly groundwater level measurements will continue to be collected from all the monitoring wells to determine groundwater flow direction and gradient. Collected groundwater samples will be analyzed for TPHg,

BTXE, five-fuel oxygenates/additives, TPHd, and TPHmo.

- SounPacific is in the process of submitting a “Subsurface Investigation Work Plan”, for further groundwater delineation at the Site, as requested by the NCRWQCB in a letter dated October 19, 2005. In addition to addressing the delineation of the groundwater contamination, the Work Plan also includes excavation of contaminated soils (TPHg > 100 ppm) in the vicinity of the previous dispenser islands.

CERTIFICATION

This report was prepared under the direct supervision of a California registered geologist at SounPacific. All information provided in this report including statements, conclusions and recommendations are based solely upon field observations and analyses performed by a state-certified laboratory. SounPacific is not responsible for laboratory errors.

SounPacific promises to perform all its work in a manner that is currently used by members in similar professions working in the same geographic area. SounPacific will do what ever is reasonable to ensure that data collection is accurate. Please note however, that rain, buried utilities, and other factors can influence groundwater depths, directions and other factors beyond what SounPacific could reasonably determine.

SounPacific

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ATTACHMENTS

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Tables & Chart

Table 1
Soil Analytical Results
Crescent Shell
890 L Street
Crescent City, California 95531

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	TPHd (ppm)	TPHmo (ppm)	TPH (ppm)	Lead (ppm)
B-1 @ 4.5'	B-1	3/22/1995	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	----	2.1	ND < 2.0	----	ND < 5
B-2 @ 4.5'	B-2	3/22/1995	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	----	ND < 1.0	ND < 2.0	----	ND < 5
B.P.CC W-Oil Pipe	Piping Run	4/21/1995	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	----	ND < 1.0	----	ND < 50	----
Oil Tank 5' South	UST Pit	4/21/1995	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	----	ND < 1.0	----	ND < 50	----
Pipe Heat Oil	Piping Run	4/21/1995	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	----	ND < 1.0	----	ND < 50	----
B.P.CC South 5'	UST Pit	4/21/1995	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	----	3.1	----	56	----
B.P.CC North 5'	UST Pit	4/21/1995	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	----	ND < 1.0	----	ND < 50	----
Oil Tank North 5'	UST Pit	4/21/1995	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	----	ND < 1.0	----	ND < 50	----
B-3 @ 7.5'	B-3	9/29/1997	1.2	ND < 0.005	ND < 0.005	0.0057	0.0059	ND < 0.05	6.8	58	----	----
B-3 @ 10.5'	B-3	9/29/1997	770	ND < 0.05	ND < 1.5	10.7	2.5	ND < 0.5	64	ND < 10	----	----
B-4 @ 5.5'	B-4	9/29/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----
B-4 @ 10'	B-4	9/29/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----
B-5 @ 6'	B-5	9/29/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----
B-5 @ 10.5'	B-5	9/29/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----
B-6 @ 5.5'	B-6	9/29/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----
B-6 @ 10'	B-6	9/29/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	2.1	ND < 10	----	----
B-7 @ 5.5'	B-7	9/29/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----
B-7 @ 10'	B-7	9/29/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----
B-8 @ 5.5'	B-8	9/30/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----
B-8 @ 10.5'	B-8	9/30/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.12	12	260	----	----
B-10 @ 5'	B-10	9/30/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----
B-10 @ 10'	B-10	9/30/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----
MW-1 @ 5.5'	MW-1	9/30/1997	20	ND < 0.005	ND < 0.04	ND < 0.4	ND < 0.2	0.069	4.5	ND < 10	----	----
MW-1 @ 11'	MW-1	9/30/1997	7,000	4.9	ND < 20	77	100	ND < 13	75	ND < 10	----	----
MW-2 @ 5'	MW-2	9/30/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	0.13	ND < 1.0	ND < 10	----	----
MW-2 @ 10'	MW-2	9/30/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----
MW-3 @ 5'	MW-3	9/30/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	3.6	61	----	----
MW-3 @ 10'	MW-3	9/30/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	15	330	----	----
SP-165-B-11 @ 5'	B-11	4/3/2001	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 10	20.0	----	----
SP-165-B-11 @ 8'	B-11	4/3/2001	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 10	ND < 10	----	----
SP-165-B-12 @ 4'	B-12	4/3/2001	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 10	ND < 10	----	----
SP-165-B-12 @ 8'	B-12	4/3/2001	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 10	ND < 10	----	----
SP-165-B-13 @ 4'	B-13	4/3/2001	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	0.007	ND < 10	ND < 10	----	----
SP-165-B-13 @ 6'	B-13	4/3/2001	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	0.011	ND < 10	ND < 10	----	----
SP-165-B-13 @ 8'	B-13	4/3/2001	0.06	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	0.011	ND < 10	ND < 10	----	----
SP-165-B-14 @ 4'	B-14	4/2/2001	9.72	ND < 0.025	0.053	0.834	0.082	0.097	ND < 10	ND < 10	----	----
SP-165-B-14 @ 8'	B-14	4/2/2001	1,310,000	ND < 0.750	20.9	178	27	ND < 0.750	125	ND < 10	----	----
SP-165-B-15 @ 4'	B-15	4/2/2001	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	0.026	ND < 10	ND < 10	----	----
SP-165-B-15 @ 5'	B-15	4/3/2001	2,900,000	ND < 0.750	ND < 0.750	318.3	50.9	ND < 5.0	2,480	23.0	----	----
SP-165-B-15 @ 8'	B-15	4/2/2001	4,100,000	ND < 7.5	12.5	421	71.8	ND < 7.5	2,700	150	----	----
SP-165-B-16 @ 4'	B-16	4/2/2001	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	0.011	ND < 10	ND < 10	----	----
SP-165-B-16 @ 8'	B-16	4/2/2001	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	0.016	ND < 10	ND < 10	----	----

Table 1 (cont.)
Soil Analytical Results
 Crescent Shell
 890 L Street
 Crescent City, California 95531

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPHd (ppm)	TPHmo (ppm)
SB-17@3'	B-17	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-17@7'	B-17	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-17@11'	B-17	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-17@14'	B-17	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-17@20'	B-17	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 4.0	50
SB-18@3'	B-18	4/14/2003	ND < 9.3	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-18@7'	B-18	4/14/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-18@10'	B-18	4/14/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	12	41
SB-19@3'	B-19	4/14/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-19@8'	B-19	4/14/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	4.3	ND < 40
SB-19@11'	B-19	4/14/2003	ND < 1.0	0.48	ND < 0.46	0.71	0.46	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-19@13'	B-19	4/14/2003	4.0	ND < 0.46	ND < 0.46	0.68	0.60	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	3.6	ND < 10
SB-19@14.5'	B-19	4/14/2003	9,900	12	3.2	157.7	140	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	1.8	ND < 10
SB-19@22'	B-19	4/14/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-20@3.5'	B-20	4/14/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	3.8	ND < 10
SB-20@7.5'	B-20	4/14/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-20@11'	B-20	4/14/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-20@15'	B-20	4/14/2003	120	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	82	ND < 10
SB-20@17'	B-20	4/14/2003	ND < 9.6	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-20@20'	B-20	4/14/2003	ND < 9.3	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-21@3'	B-21	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-21@7'	B-21	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-21@10'	B-21	4/16/2003	1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-21@16'	B-21	4/16/2003	280	ND < 0.555	ND < 0.555	ND < 1.11	2.3	ND < 0.555	ND < 0.555	ND < 0.555	ND < 0.555	ND < 0.555	99	ND < 10
SB-21@18'	B-21	4/16/2003	1.1	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-21@20'	B-21	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-22@3'	B-22	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-22@8'	B-22	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-22@10'	B-22	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-22@12'	B-22	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-22@16'	B-22	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	0.006	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-22@20'	B-22	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-23@3'	B-23	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-23@7'	B-23	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-23@10'	B-23	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-23@14'	B-23	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-23@17.5'	B-23	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-23@20'	B-23	4/16/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10

Table 1 (cont.)
Soil Analytical Results
Crescent Shell
890 L Street
Crescent City, California 95531

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPHd (ppm)	TPHmo (ppm)
SB-24@3'	B-24	4/15/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-24@6'	B-24	4/15/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-24@10'	B-24	4/15/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 1.0
SB-24@14'	B-24	4/15/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 1.0
SB-24@20'	B-24	4/15/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 1.0
SB-25@3'	B-25	4/15/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-25@8'	B-25	4/15/2003	5	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-25@11'	B-25	4/15/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-25@14'	B-25	4/15/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-25@20'	B-25	4/15/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-26@3'	B-26	4/15/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-26@7.5'	B-26	4/15/2003	ND < 1.0	0.007	ND < 0.005	ND < 0.01	0.014	0.006	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-26@11.5'	B-26	4/15/2003	20	ND < 0.90	ND < 0.90	4.8	3.2	ND < 0.90	ND < 0.90	ND < 0.90	ND < 0.90	ND < 0.90	24	ND < 10
SB-26@14'	B-26	4/15/2003	5,500	14	5.2	435	130	ND < 0.95	ND < 0.95	ND < 0.95	ND < 0.95	ND < 0.95	25	ND < 10
SB-26@20'	B-26	4/15/2003	ND < 1.0	ND < 0.005	ND < 0.005	0.051	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-27@3'	B-27	4/15/2003	3.7	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-27@5'	B-27	4/15/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-27@10'	B-27	4/15/2003	1.3	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-27@14'	B-27	4/15/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-27@20'	B-27	4/15/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 1.0	ND < 10
SB-28@ 3'	B-28	2/28/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-28@6'	B-28	2/28/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	40
SB-28@8'	B-28	2/28/2005	23.2	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	ND < 10	ND < 10
SB-28@12'	B-28	2/28/2005	104	ND < 0.500	ND < 0.500	ND < 0.500	0.592	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	1,110	ND < 100
SB-29@4'	B-29	2/28/2005	7,410	ND < 12.5	26.2	726	132	ND < 12.5	ND < 12.5	ND < 12.5	ND < 12.5	ND < 12.5	1,240	ND < 100
SB-29@8'	B-29	2/28/2005	3,220	ND < 5.00	ND < 5.00	188	71.5	ND < 5.00	ND < 5.00	ND < 5.00	ND < 5.00	ND < 50.0	333	ND < 30
SB-29@12'	B-29	2/28/2005	6,480	ND < 12.5	ND < 12.5	999	172	ND < 12.5	ND < 12.5	ND < 12.5	ND < 12.5	ND < 125	ND < 10	ND < 10
SB-30@2'	B-30	2/28/2005	2,060	ND < 10.0	ND < 10.0	ND < 10.0	ND < 10.0	ND < 10.0	ND < 10.0	ND < 10.0	ND < 10.0	ND < 100	1,020	ND < 100
SB-30@5'	B-30	2/28/2005	2,840	ND < 5.00	ND < 5.00	ND < 5.00	14.1	ND < 5.00	ND < 5.00	ND < 5.00	ND < 5.00	ND < 50.0	1,170	ND < 100
SB-30@8'	B-30	2/28/2005	2,630	ND < 5.00	ND < 5.00	6.6	18.6	ND < 5.00	ND < 5.00	ND < 5.00	ND < 5.00	ND < 50.0	331	ND < 30
SB-30@10'	B-30	2/28/2005	5,480	ND < 10.0	ND < 10.0	10.1	36.4	ND < 10.0	ND < 10.0	ND < 10.0	ND < 10.0	ND < 100	3,430	ND < 500
SB-31@4'	B-31	2/28/2005	0.453	ND < 0.005	ND < 0.005	0.0058	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-31@6'	B-31	2/28/2005	0.840	0.014	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-31@9'	B-31	2/28/2005	17.0	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	ND < 10	15
SB-31@12'	B-31	2/28/2005	168	ND < 0.500	ND < 0.500	ND < 0.500	1.21	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	ND < 0.500	ND < 10	ND < 10
SB-32@4'	B-32	2/28/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-32@8'	B-32	2/28/2005	0.168	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-32@10'	B-32	2/28/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-32@12'	B-32	2/28/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10

Table 1 (cont.)
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Crescent City, California 95531

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPHd (ppm)	TPHmo (ppm)
SB-33@3'	B-33	3/1/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	26
SB-33@6'	B-33	3/1/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-33@9'	B-33	3/1/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-33@12	B-33	3/1/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-34@3'	B-34	3/1/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-34@6'	B-34	3/1/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-34@9'	B-34	3/1/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-34@12'	B-34	3/1/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-35@3'	B-35	3/1/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-35@6.5'	B-35	3/1/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-35@9'	B-35	3/1/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10
SB-35@12'	B-35	3/1/2005	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 10	ND < 10

Notes:

TPHg: TPH as gasoline

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl ether

TAME: Tertiary amyl methyl ether

ETBE: Ethyl tertiary butyl ether

TBA: Tertiary butanol

TPHd: TPH as diesel

TPHmo: TPH as motor oil

ppm: parts per million = µg/gram = mg/kg = 1000 ppb

ND: Not detected. Sample was not detected at or above the method detection limit as shown.

Table 2
Groundwater Analytical Results
 Crescent Shell
 890 L Street
 Crescent City, California 95531

Sample ID	Sample Location	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	TPHd (ppb)	TPHmo (ppb)	TPH (ppb)	Lead (ppb)
B-1	B-1	3/22/1995	31,000	3,700	200	620	1,900	----	----	----	----	----	6,400	ND < 100	----	89
B-2	B-2	3/22/1995	160,000	25,000	16,000	14,000	4,000	----	----	----	----	----	4,600	ND < 100	----	72
B.P.CC	B.P.CC	4/21/1995	ND < 50	ND < 0.5	0.7	ND < 1.0	ND < 0.5	----	----	----	----	----	ND < 50	----	1,700	----
B-4	B-4	9/29/1997	250	ND < 0.5	ND < 5.0	1.6	1.0	ND < 5.0	----	----	----	----	51	ND < 500	----	----
B-5	B-5	9/29/1997	1,300	ND < 0.5	15	ND < 4.0	ND < 1.0	ND < 5.0	----	----	----	----	98	ND < 500	----	----
B-7	B-7	9/29/1997	110	ND < 0.5	ND < 2.0	ND < 1.0	ND < 0.5	ND < 5.0	----	----	----	----	ND < 50	ND < 500	----	----
B-9	B-9	9/30/1997	21,000	6,300	240	770	1,800	22,000	----	----	----	----	780	ND < 500	----	----
B-10	B-10	9/30/1997	1,800	89	ND < 10	13	50	10	----	----	----	----	350	ND < 500	----	----
SP165-B-11 @ 10'	B-11	4/3/2001	9,440	505	45.6	575	1,960	16.0	----	----	----	----	2,360	ND < 50	----	----
SP165-B-11 @ 20'	B-11	4/3/2001	221	9.7	2.0	12.6	37.7	ND < 2.0	----	----	----	----	467	88.0	----	----
SP165-B-11 @ 30'	B-11	4/3/2001	361	4.8	6.1	33.0	16.4	ND < 2.0	----	----	----	----	1,980	82.0	----	----
SP165-B-11 @ 36'	B-11	4/3/2001	327	10.5	8.4	40.0	26.9	ND < 2.0	----	----	----	----	3,830	120	----	----
SP165-B-12 @ 10'	B-12	4/3/2001	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	3.7	----	----	----	----	108	ND < 50	----	----
SP165-B-12 @ 20'	B-12	4/3/2001	ND < 50	ND < 0.3	0.3	0.7	0.4	4.0	----	----	----	----	284	ND < 50	----	----
SP165-B-12 @ 30'	B-12	4/3/2001	ND < 50	ND < 0.3	0.3	1.7	0.9	ND < 2.0	----	----	----	----	380	ND < 50	----	----
SP165-B-12 @ 36'	B-12	4/3/2001	ND < 50	0.5	0.7	2.8	2.3	ND < 2.0	----	----	----	----	2,620	190	----	----
SP165-B-13 @ 10'	B-13	4/3/2001	1,110	ND < 3.0	ND < 3.0	ND < 6.0	ND < 3.0	ND < 20	----	----	----	----	302	ND < 50	----	----
SP165-B-13 @ 20'	B-13	4/3/2001	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	ND < 2.0	----	----	----	----	ND < 50	ND < 50	----	----
SP165-B-13 @ 30'	B-13	4/3/2001	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	ND < 2.0	----	----	----	----	143	ND < 50	----	----
SP165-B-13 @ 36'	B-13	4/3/2001	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	ND < 2.0	----	----	----	----	1,480	95.0	----	----
SP165-B-14 @ 10'	B-14	4/2/2001	902,000	4,260	8,870	184,000	16,500	ND < 20,000	----	----	----	----	775,000	3,730	----	----
SP165-B-14 @ 20'	B-14	4/2/2001	217	5.2	17.0	28.7	11.2	ND < 2.0	----	----	----	----	2,810	ND < 50	----	----
SP165-B-15 @ 10'	B-15	4/2/2001	7,660	789	69.7	849	489	2.3	----	----	----	----	1,730	ND < 50	----	----
SP165-B-15 @ 20'	B-15	4/2/2001	5,330	20.2	35.3	956	172	2.5	----	----	----	----	5,620	ND < 50	----	----
SP165-B-16 @ 10'	B-16	4/2/2001	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	ND < 2.0	----	----	----	----	70.0	ND < 50	----	----
SP165-B-16 @ 20'	B-16	4/2/2001	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	ND < 2.0	----	----	----	----	952	ND < 50	----	----
SBGW-17	B-17	4/16/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 200	ND < 2,000	----	----
SBGW-18	B-18	4/14/2003	52	6.0	ND < 0.5	ND < 1	ND < 0.5	0.8	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	----	----
SBGW-19 @ 6.4'	B-19	4/14/2003	36,000	3,300	320	5,830	2,900	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	ND < 500	----	----
SBGW-19 @ 23'	B-19	4/14/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	0.7	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	----	----
SBGW-20	B-20	4/14/2003	66	3.1	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	----	----
SBGW-21	B-21	4/16/2003	5,300	8.1	1.5	7.2	260	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 500	----	----	----
SBGW-22	B-22	4/16/2003	340	2.4	ND < 0.5	ND < 1	9.8	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 500	----	----	----
SBGW-23	B-23	4/16/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	170	ND < 1,000	----	----
SBGW-28	B-28	2/28/2005	6,630	ND < 10.0	ND < 10.0	32.2	964	ND < 20.0	ND < 10.0	ND < 10.0	ND < 10.0	ND < 1,000	1,400	ND < 50	----	----
SBGW-29	B-29	2/28/2005	34,700	405	83.5	9,580	2,040	ND < 50.0	ND < 25.0	ND < 25.0	ND < 25.0	ND < 2,500	5,750	ND < 100	----	----
SBGW-30	B-30	2/28/2005	6,470	ND < 10.0	ND < 10.0	49.8	1,110	ND < 20.0	ND < 10.0	ND < 10.0	ND < 10.0	ND < 1,000	2,910	77	----	----
SBGW-31	B-31	2/28/2005	3,600	10.6	8.6	275	434	ND < 8.0	ND < 4.0	ND < 4.0	ND < 4.0	ND < 400	503	ND < 50.0	----	----
SBGW-32	B-32	2/28/2005	128	ND < 0.5	ND < 0.5	ND < 1.0	3.2	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	69	ND < 50	----	----
SBGW-33	B-33	3/1/2005	3,300	7.3	ND < 0.5	8.0	10	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 10	490	ND < 170	----	----
SBGW-34	B-34	3/1/2005	23,000	2,900	81	1,600	2,000	ND < 12	ND < 1.0	ND < 1.0	ND < 1.0	ND < 10	740	ND < 170	----	----
SBGW-35	B-35	3/1/2005	810	9.4	ND < 0.5	1.4	39	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 10	75	ND < 170	----	----

Notes:

TPHg: TPH as gasoline
 MTBE: Methyl tertiary butyl ether
 DIPE: Diisopropyl ether
 TAME: Tertiary amyl methyl ether
 ETBE: Ethyl tertiary butyl ether

TBA: Tertiary butanol
 TPHd: TPH as diesel
 TPHmo: TPH as motor oil
 ppb: parts per billion = µg/liter = 0.001 mg/l = 0.001 ppm.
 ND: Not detected. Sample was not detected at or above the method detection limit as shown.

Table 3
Water Levels
Crescent Shell
890 L Street
Crescent City, California 95531

Sample Location	Date	Depth to Bottom/ Feet BGS	Survey Height/ Feet Above MSL	Depth to Water/ Feet BGS	Adjusted Elevation/ Feet Above MSL	Thickness of Floating Product/ Feet	Corrected Adjusted Elevation/ feet Above MSL
MW-1	5/6/2002	13.41	36.78	7.70	29.08	----	----
	8/4/2002	13.44	36.78	9.88	26.90	----	----
	11/6/2002	13.42	36.78	11.69	25.09	----	----
	2/7/2003	13.47	36.78	3.97	32.81	----	----
	4/22/2003	13.65	36.78	3.82	32.96	----	----
	5/22/2003	13.65	36.78	5.64	31.14	SHEEN	----
	6/26/2003	13.65	36.78	8.01	28.77	0.01	28.77
	7/22/2003	13.65	36.78	9.00	27.78	0.00	27.78
	8/25/2003	13.65	36.78	9.92	26.86	0.00	26.86
	9/22/2003	13.65	36.78	10.51	26.27	0.00	26.27
	10/23/2003	13.65	36.78	11.11	25.67	0.00	25.67
	11/25/2003	13.65	36.78	10.63	26.15	0.00	26.15
	12/16/2003	13.65	36.78	7.41	29.37	0.00	29.37
	1/23/2004	13.65	36.78	4.41	32.37	0.00	32.37
	2/24/2004	13.65	36.78	2.60	34.18	0.00	34.18
	3/26/2004	13.65	36.78	4.51	32.27	0.00	32.27
	4/29/2004	13.65	36.78	5.75	31.03	0.00	31.03
	7/30/2004	13.68	36.78	9.94	26.84	0.00	26.84
	11/2/2004	13.67	36.78	10.39	26.39	0.00	26.39
	1/30/2005	13.40	36.78	6.76	30.02	0.00	30.02
	4/11/2005	13.39	36.78	3.60	33.18	0.00	33.18
	7/10/2005	13.40	36.78	8.05	28.73	0.00	28.73
	10/15/2005	13.70	36.78	10.69	26.09	0.00	26.09
	1/24/2006	13.40	36.78	3.30	33.48	0.00	33.48
MW-2	5/6/2002	13.48	37.20	9.25	27.95	----	----
	8/4/2002	13.49	37.20	11.24	25.96	----	----
	11/6/2002	13.50	37.20	12.90	24.30	----	----
	2/7/2003	13.52	37.20	6.38	30.82	----	----
	4/22/2003	13.41	37.20	6.33	30.87	----	----
	5/22/2003	13.41	37.20	7.74	29.46	0.00	29.46
	6/26/2003	13.41	37.20	9.58	27.62	0.00	27.62
	7/22/2003	13.41	37.20	10.43	26.77	0.00	26.77
	8/25/2003	13.41	37.20	11.26	25.94	0.00	25.94
	9/22/2003	13.41	37.20	11.8	25.40	0.00	25.4
	10/23/2003	13.41	37.20	12.35	24.85	0.00	24.85
	11/25/2003	13.41	36.78	12.83	23.95	0.00	23.95
	12/16/2003	13.41	36.78	7.89	28.89	0.00	28.89
	1/23/2004	13.41	37.20	6.69	30.51	0.00	30.51
	2/24/2004	13.41	37.20	4.37	32.83	0.00	32.83
	3/26/2004	13.41	37.20	6.33	30.87	0.00	30.87
	4/29/2004	13.41	37.20	7.65	29.55	0.00	29.55
	7/30/2004	13.74	37.20	11.27	25.93	0.00	25.93
	11/2/2004	13.43	37.20	11.55	25.65	0.00	25.65
	1/30/2005	13.75	37.20	8.37	28.83	0.00	28.83
	4/11/2005	13.77	37.20	5.58	31.62	0.00	31.62
	7/10/2005	13.72	37.20	9.57	27.63	0.00	27.63
	10/15/2005	13.45	37.20	11.94	25.26	0.00	25.26
	1/24/2006	13.78	37.20	5.60	31.60	0.00	31.60

Table 3 (cont.)
Water Levels
Crescent Shell
890 L Street
Crescent City, California 95531

Sample Location	Date	Depth to Bottom/ Feet BGS	Survey Height/ Feet Above MSL	Depth to Water/ Feet BGS	Adjusted Elevation/ Feet Above MSL	Thickness of Floating Product/ Feet	Corrected Adjusted Elevation/ feet Above MSL
MW-6	4/22/2003	18.74	37.80	7.35	30.45	----	----
	5/22/2003	18.69	37.80	8.73	29.07	SHEEN	----
	6/26/2003	18.74	37.80	10.48	27.32	0.00	27.32
	7/22/2003	18.74	37.80	11.31	26.49	0.00	26.5
	8/25/2003	18.74	37.80	12.13	25.67	0.00	25.67
	9/22/2003	18.74	37.80	12.67	25.13	0.00	25.13
	10/23/2003	18.74	37.80	13.18	24.62	0.00	24.62
	11/25/2003	18.74	36.78	12.66	24.12	0.00	24.12
	12/16/2003	18.74	36.78	8.42	28.36	0.00	28.36
	1/23/2004	18.74	37.80	7.71	30.09	0.00	30.09
	2/24/2004	18.74	37.80	5.24	32.56	0.00	32.56
	3/26/2004	18.74	37.80	7.15	30.65	0.00	30.65
	4/29/2004	18.74	37.80	8.60	29.20	0.00	29.20
	7/30/2004	18.69	37.80	12.14	25.66	0.00	25.66
	11/2/2004	18.63	37.80	12.37	25.43	0.00	25.43
	1/30/2005	18.70	37.80	9.26	28.54	0.00	28.54
	4/11/2005	18.68	37.80	6.51	31.29	0.00	31.29
	7/10/2005	18.64	37.80	10.47	27.33	0.00	27.33
	10/15/2005	18.65	37.80	11.78	26.02	0.00	26.02
	1/24/2006	18.61	37.80	6.57	31.23	0.00	31.23
MW-7	4/22/2003	18.31	36.88	4.3	32.57	----	----
	5/22/2003	18.30	36.88	5.95	30.93	0.00	30.93
	6/26/2003	18.31	36.88	8.29	28.59	0.00	28.59
	7/22/2003	18.31	36.88	9.29	27.59	0.00	27.59
	8/25/2003	18.31	36.88	10.23	26.65	0.00	26.65
	9/22/2003	18.31	36.88	10.81	26.07	0.00	26.07
	10/23/2003	18.31	36.88	11.38	25.50	0.00	25.50
	11/25/2003	18.31	36.78	10.84	25.94	0.00	25.94
	12/16/2003	18.31	36.78	6.75	30.03	0.00	30.03
	1/23/2004	18.31	36.88	4.80	32.08	0.00	32.08
	2/24/2004	18.31	36.88	2.65	34.23	0.00	34.23
	3/26/2004	18.31	36.88	4.59	32.29	0.00	32.29
	4/29/2004	18.31	36.88	5.93	30.95	0.00	30.95
	7/30/2004	18.30	36.88	10.21	26.67	0.00	26.67
	11/2/2004	18.22	36.88	10.53	26.35	0.00	26.35
	1/30/2005	18.31	36.88	6.84	30.04	0.00	30.04
	4/11/2005	18.23	36.88	3.76	33.12	0.00	33.12
	7/10/2005	18.45	36.88	8.30	28.58	0.00	28.58
	10/15/2005	18.42	36.88	10.95	25.93	0.00	25.93
	1/24/2006	18.40	36.88	3.62	33.26	0.00	33.26
MW-8	4/11/2005	14.20	37.88	7.32	30.56	0.00	30.56
	7/10/2005	14.22	37.88	10.92	26.96	0.00	26.96
	10/15/2005	14.20	37.88	13.07	24.81	0.00	24.81
	1/24/2006	14.17	37.88	7.41	30.47	0.00	30.47

Corrected Adjusted Elevation =

Adjusted Groundwater Elevation + (Thickness of product x (density of product/density of water)

Density of product = 0.73 g/mL (density of oil)

Density of water = 1g/mL

Table 3 (cont.)
Water Levels
Crescent Shell
890 L Street
Crescent City, California 95531

Sample Location	Date	Depth to Bottom/ Feet BGS	Survey Height/ Feet Above MSL	Depth to Water/ Feet BGS	Adjusted Elevation/ Feet Above MSL	Thickness of Floating Product/ Feet	Corrected Adjusted Elevation/ feet Above MSL
MW-4	4/22/2003	18.92	36.86	5.20	31.66	----	----
	5/22/2003	18.91	36.86	6.74	30.12	0.01	30.13
	6/26/2003	18.92	36.86	9.64	27.22	0.01	27.23
	7/22/2003	18.92	36.86	9.51	27.35	0.01	27.36
	8/25/2003	18.92	36.86	10.38	26.48	0.01	26.49
	9/22/2003	18.92	36.86	10.94	25.92	0.00	25.92
	10/23/2003	18.92	36.86	11.52	25.34	0.00	25.34
	11/25/2003	18.92	36.78	11.04	25.74	0.00	25.74
	12/16/2003	18.92	36.78	8.05	28.73	0.00	28.73
	1/23/2004	18.92	36.86	5.65	31.21	0.00	31.21
	2/24/2004	18.92	36.86	3.82	33.04	0.00	33.04
	3/26/2004	18.92	36.86	5.79	31.07	0.00	31.07
	4/29/2004	18.92	36.86	6.79	30.07	0.00	30.07
	7/30/2004	18.91	36.86	10.43	26.43	0.00	26.43
	11/2/2004	18.91	36.86	10.83	26.03	0.00	26.03
	1/30/2005	18.91	36.86	7.54	29.32	0.00	29.32
	4/11/2005	18.93	36.86	4.82	32.04	0.00	32.04
	7/10/2005	18.95	36.86	8.67	28.19	0.00	28.19
	10/15/2005	18.95	36.86	11.10	25.76	0.00	25.76
	1/24/2006	18.92	36.86	4.62	32.24	0.00	32.24
MW-5	4/22/2003	18.83	37.27	6.17	31.10	----	----
	5/22/2003	18.87	37.27	7.60	29.67	0.01	29.68
	6/26/2003	18.83	37.27	9.46	27.81	SHEEN	----
	7/22/2003	18.83	37.27	10.31	26.96	SHEEN	----
	8/25/2003	18.83	37.27	11.17	26.10	0.00	26.10
	9/22/2003	18.83	37.27	11.71	25.56	0.00	25.56
	10/23/2003	18.83	37.27	12.26	25.01	0.00	25.01
	11/25/2003	18.83	36.78	12.77	24.01	0.00	24.01
	12/16/2003	18.83	36.78	8.09	28.69	0.00	28.69
	1/23/2004	18.83	37.27	6.53	30.74	0.00	30.74
	2/24/2004	18.83	37.27	4.39	32.88	0.00	32.88
	3/26/2004	18.83	37.27	6.41	30.86	0.00	30.86
	4/29/2004	18.83	37.27	7.55	29.72	0.00	29.72
	7/30/2004	18.81	37.27	11.18	26.09	0.00	26.09
	11/2/2004	18.86	37.27	11.48	25.79	0.00	25.79
	1/30/2005	18.79	37.27	8.26	29.01	0.00	29.01
	4/11/2005	18.78	37.27	5.51	31.76	0.00	31.76
	7/10/2005	18.87	37.27	9.47	27.80	0.00	27.80
	10/15/2005	18.86	37.27	11.83	25.44	0.00	25.44
	1/24/2006	18.77	37.27	5.47	31.80	0.00	31.80

Table 4
Groundwater Analytical Results From Monitoring Wells
Crescent Shell
890 L Street
Crescent City, California 95531

Sample Location	Annual Event	Sample Event	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	TPHd (ppb)	TPHmo (ppb)
MW-1	Second Quarter	First Quarterly	5/5/2002	52,800	ND < 300	ND < 300	ND < 300	3,730	ND < 300	ND < 500	ND < 500	ND < 500	ND < 100,000	3,180	822
	Third Quarter	Second Quarterly	8/3/2002	10,400	ND < 60	ND < 60	859	5,000	ND < 400	ND < 100	ND < 100	ND < 100	ND < 20,000	4,670	ND < 50
	Fourth Quarter	Third Quarterly	11/6/2002	6,030	ND < 60	103	313	4,370	349	ND < 100	ND < 100	ND < 100	ND < 20,000	2,080	ND < 50
	First Quarter	Fourth Quarterly	2/7/2003	14,000	32	37	212	2,200	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	1,800	ND < 500
	Second Quarter	Well Installation	4/22/2003	13,000	ND < 50	ND < 50	190	1,900	ND < 50	ND < 50	ND < 50	ND < 50	ND < 500	4,000	ND < 500
	Third Quarter	Fifth Quarterly	7/22/2003	920	11	40	266	1,100	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	6,800	ND < 500
	Fourth Quarter	Sixth Quarterly	10/23/2003	21,000	18	51	235	6,100	ND < 10	ND < 10	ND < 10	ND < 10	ND < 100	4,900	ND < 500
	First Quarter	Seventh Quarterly	1/23/2004	7,600	73	ND < 50	130	1,800	ND < 50	ND < 50	ND < 50	ND < 50	ND < 500	ND < 50	ND < 500
	Second Quarter	Eighth Quarterly	4/29/2004	16,000	ND < 50	ND < 50	91	2,000	ND < 50	ND < 50	ND < 50	ND < 50	ND < 500	4,400	ND < 500
	Third Quarter	Ninth Quarterly	7/30/2004	13,000	ND < 50	ND < 50	110	3,700	ND < 50	ND < 50	ND < 50	ND < 50	ND < 500	6,200	ND < 500
	Fourth Quarter	Tenth Quarterly	11/2/2004	14,000	ND < 50	76	304	4,200	ND < 50	ND < 50	ND < 50	ND < 50	ND < 500	4,100	ND < 500
	First Quarter	Eleventh Quarterly	1/30/2005	8,040	21.0	11.0	1,940	1,550	ND < 20.0	ND < 10.0	ND < 100	ND < 100	ND < 1,000	3,340	ND < 50
	Second Quarter	Twelfth Quarterly	4/11/2005	16,300	ND < 10	4,770	57.6	1,990	ND < 20.0	ND < 10.0	ND < 10.0	ND < 10.0	ND < 1,000	8,340	1,830
	Third Quarter	Thirteenth Quarterly	7/10/2005	22,200	34.0	2,220	4,560	2,180	ND < 50.0	ND < 25.0	ND < 25.0	ND < 25.0	ND < 2,500	16,100	2,690
MW-2	Fourth Quarter	Fourteenth Quarterly	10/15/2005	71,100	1,840	20,400	11,800	4,180	9,810	ND < 10.0	1,350	ND < 10.0	ND < 1000	3,420	ND < 50
	First Quarter	Fifteenth Quarterly	1/24/2006	6,110	5.8	ND < 4.0	18.3	916	ND < 8.0	ND < 4.0	ND < 4.0	ND < 4.0	ND < 400	2,930	80
	Second Quarter	First Quarterly	5/5/2002	1,440	5.1	ND < 0.3	2.6	54	ND < 2.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 100	380	ND < 50
	Third Quarter	Second Quarterly	8/3/2002	1,280	96.6	4.4	11.8	433	ND < 2.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 100	1,300	ND < 50
	Fourth Quarter	Third Quarterly	11/6/2002	479	75.1	4.1	15	237	ND < 2.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 100	379	ND < 50
	First Quarter	Fourth Quarterly	2/7/2003	470	2.2	ND < 0.5	ND < 1	0.6	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	90	ND < 500
	Second Quarter	Well Installation	4/22/2003	740	2.0	ND < 0.5	ND < 1	5.7	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	270	ND < 500
	Third Quarter	Fifth Quarterly	7/22/2003	2,000	11	1.8	10	120	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	530	ND < 500
	Fourth Quarter	Sixth Quarterly	10/23/2003	3,100	180	7.8	22	770	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	1,000	ND < 500
	First Quarter	Seventh Quarterly	1/23/2004	150	1.0	ND < 0.5	ND < 1	1.2	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Second Quarter	Eighth Quarterly	4/29/2004	1,400	1.1	ND < 0.5	ND < 1	8.2	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	300	ND < 500
	Third Quarter	Ninth Quarterly	7/30/2004	2,100	6.7	2.5	6.2	240	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	890	ND < 500
	Fourth Quarter	Tenth Quarterly	11/2/2004	2,000	12	ND < 5	ND < 15	720	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	560	ND < 500
	First Quarter	Eleventh Quarterly	1/30/2005	566	0.5	ND < 0.5	ND < 1.0	0.5	ND < 1.0	ND < 1.0	ND < 5.0	ND < 5.0	ND < 50	218	ND < 50
	Second Quarter	Twelfth Quarterly	4/11/2005	10,300	ND < 5.0	5,100	12.1	5.7	ND < 10.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 500	128,000	39,800
	Third Quarter	Thirteenth Quarterly	7/10/2005	1,670	3.3	63.2	159	29.3	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	31,300	7,150
	Fourth Quarter	Fourteenth Quarterly	10/15/2005	28,500	516	8,990	7060	1220	2060	ND < 5.0	388	ND < 5.0	ND < 500	434	71
	First Quarter	Fifteenth Quarterly	1/24/2006	190	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 50

Notes:

TPHg: Total petroleum hydrocarbons as gasoline

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl ether

TAME: Tertiary amyl methyl ether

ETBE: Ethyl tertiary butyl ether

TBA: Tertiary butanol

TPHd: Total petroleum hydrocarbons as diesel

TPHmo: Total Petroleum hydrocarbons as motor oil

ppb: parts per billion = µg/l = 1,000 mg/l = 0.001 ppm.

ND: Not detected at or above the method detection limit as shown.

Table 4 (cont.)
Groundwater Analytical Results From Monitoring Wells
Crescent Shell
890 L Street
Crescent City, California 95531

Sample Location	Annual Event	Sample Event	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	TPHd (ppb)	TPHmo (ppb)
MW-6	Second Quarter	Well Installation	4/22/2003	82	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Third Quarter	Fifth Quarterly	7/22/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Fourth Quarter	Sixth Quarterly	10/23/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	First Quarter	Seventh Quarterly	1/23/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 5.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Second Quarter	Eighth Quarterly	4/29/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Third Quarter	Ninth Quarterly	7/30/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Fourth Quarter	Tenth Quarterly	11/2/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1	0.7	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	First Quarter	Eleventh Quarterly	1/30/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 5.0	ND < 5.0	ND < 50	ND < 50	ND < 500
	Second Quarter	Twelfth Quarterly	4/11/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	183	94
	Third Quarter	Thirteenth Quarterly	7/10/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 500
	Fourth Quarter	Fourteenth Quarterly	10/15/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 500
	First Quarter	Fifteenth Quarterly	1/24/2006	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 500
MW-7	Second Quarter	Well Installation	4/22/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Third Quarter	Fifth Quarterly	7/22/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Fourth Quarter	Sixth Quarterly	10/23/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	First Quarter	Seventh Quarterly	1/23/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Second Quarter	Eighth Quarterly	4/29/2004	75	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Third Quarter	Ninth Quarterly	7/30/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Fourth Quarter	Tenth Quarterly	11/2/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	First Quarter	Eleventh Quarterly	1/30/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 5.0	ND < 5.0	ND < 50	ND < 50	ND < 500
	Second Quarter	Twelfth Quarterly	4/11/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	150	140
	Third Quarter	Thirteenth Quarterly	7/10/2005	53.2	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 500
	Fourth Quarter	Fourteenth Quarterly	10/15/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 500
	First Quarter	Fifteenth Quarterly	1/24/2006	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	90
MW-8	Second Quarter	Twelfth Quarterly	4/11/2005	5,710	785	614	653	680	ND < 12.5	ND < 6.2	ND < 6.2	ND < 6.2	ND < 625	40,600	12,300
	Third Quarter	Thirteenth Quarterly	7/10/2005	16,800	1,540	47.5	2,420	1,990	ND < 25.0	ND < 12.5	38.8	ND < 12.5	ND < 1,250	2,950	ND < 50
	Fourth Quarter	Fourteenth Quarterly	10/15/2005	37,200	2,920	8,110	7,340	3,160	1,950	ND < 10.0	331	ND < 10.0	ND < 1,000	2,670	52
	First Quarter	Fifteenth Quarterly	1/24/2006	2,400	80.3	2.4	55.2	143	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	1,010	71

Notes:

TPHg: Total petroleum hydrocarbons as gasoline

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl ether

TAME: Tertiary amyl methyl ether

ETBE: Ethyl tertiary butyl ether

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TPHd: Total petroleum hydrocarbons as diesel

TPHmo: Total Petroleum hydrocarbons as motor oil

ppb: parts per billion = µg/l = 1,000 mg/l = 0.001 ppm.

ND: Not detected at or above the method detection limit as shown.

Table 4 (cont.)
Groundwater Analytical Results From Monitoring Wells
 Crescent Shell
 890 L Street
 Crescent City, California 95531

Sample Location	Annual Event	Sample Event	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	TPHd (ppb)	TPHmo (ppb)
MW-4	Second Quarter	Well Installation	4/22/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	0.7	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Third Quarter	Fifth Quarterly	7/22/2003	78	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Fourth Quarter	Sixth Quarterly	10/23/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	First Quarter	Seventh Quarterly	1/23/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Second Quarter	Eighth Quarterly	4/29/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Third Quarter	Ninth Quarterly	7/30/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Fourth Quarter	Tenth Quarterly	11/2/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	First Quarter	Eleventh Quarterly	1/30/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 5.0	ND < 5.0	ND < 50	ND < 50	ND < 50
	Second Quarter	Twelfth Quarterly	4/11/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	0.7	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	303	132
	Third Quarter	Thirteenth Quarterly	7/10/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 50
	Fourth Quarter	Fourteenth Quarterly	10/15/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 50
	First Quarter	Fifteenth Quarterly	1/24/2006	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 50
MW-5	Second Quarter	Well Installation	4/22/2003	4,800	98	20	530	86	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	1,500	ND < 500
	Third Quarter	Fifth Quarterly	7/22/2003	130	5.3	ND < 0.5	4.4	7.2	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Fourth Quarter	Sixth Quarterly	10/23/2003	130	22	ND < 0.5	2.6	13	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	First Quarter	Seventh Quarterly	1/23/2004	170	3.9	ND < 0.5	ND < 0.5	3.2	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Second Quarter	Eighth Quarterly	4/29/2004	270	34	1.4	32.7	15	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Third Quarter	Ninth Quarterly	7/30/2004	73	11	ND < 0.5	2.2	11	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Fourth Quarter	Tenth Quarterly	11/2/2004	140	26	0.5	13.0	25	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	First Quarter	Eleventh Quarterly	1/30/2005	75.4	9.1	0.6	6.3	9.1	ND < 1.0	ND < 0.5	ND < 5.0	ND < 5.0	ND < 50	ND < 50	ND < 50
	Second Quarter	Twelfth Quarterly	4/11/2005	19,200	5.2	9,270	13.2	3.8	ND < 5.0	ND < 2.5	ND < 2.5	ND < 2.5	ND < 250	23,300	7,290
	Third Quarter	Thirteenth Quarterly	7/10/2005	16,600	68.0	2,120	3,970	655	ND < 50.0	ND < 25.0	ND < 25.0	ND < 25.0	ND < 2,500	156	ND < 50
	Fourth Quarter	Fourteenth Quarterly	10/15/2005	33,300	855	11,100	7,020	1,230	3,940	ND < 10.0	610	ND < 10.0	ND < 1,000	ND < 50	ND < 50
	First Quarter	Fifteenth Quarterly	1/24/2006	ND < 50	1.8	ND < 0.5	6.4	2.9	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 50

Notes:

TPHg: Total petroleum hydrocarbons as gasoline

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl ether

TAME: Tertiary amyl methyl ether

ETBE: Ethyl tertiary butyl ether

TBA: Tertiary butanol

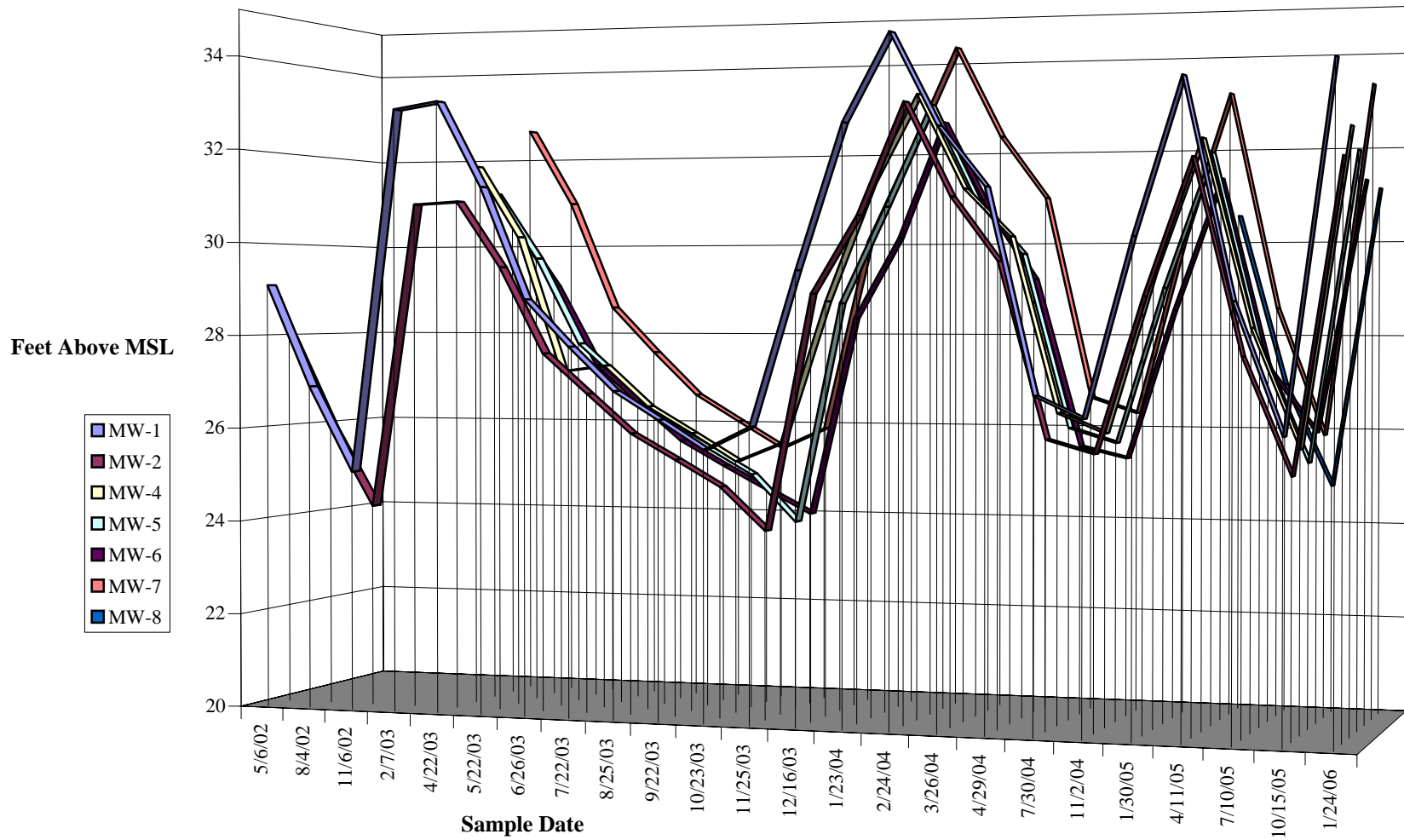
TPHd: Total petroleum hydrocarbons as diesel

TPHmo: Total Petroleum hydrocarbons as motor oil

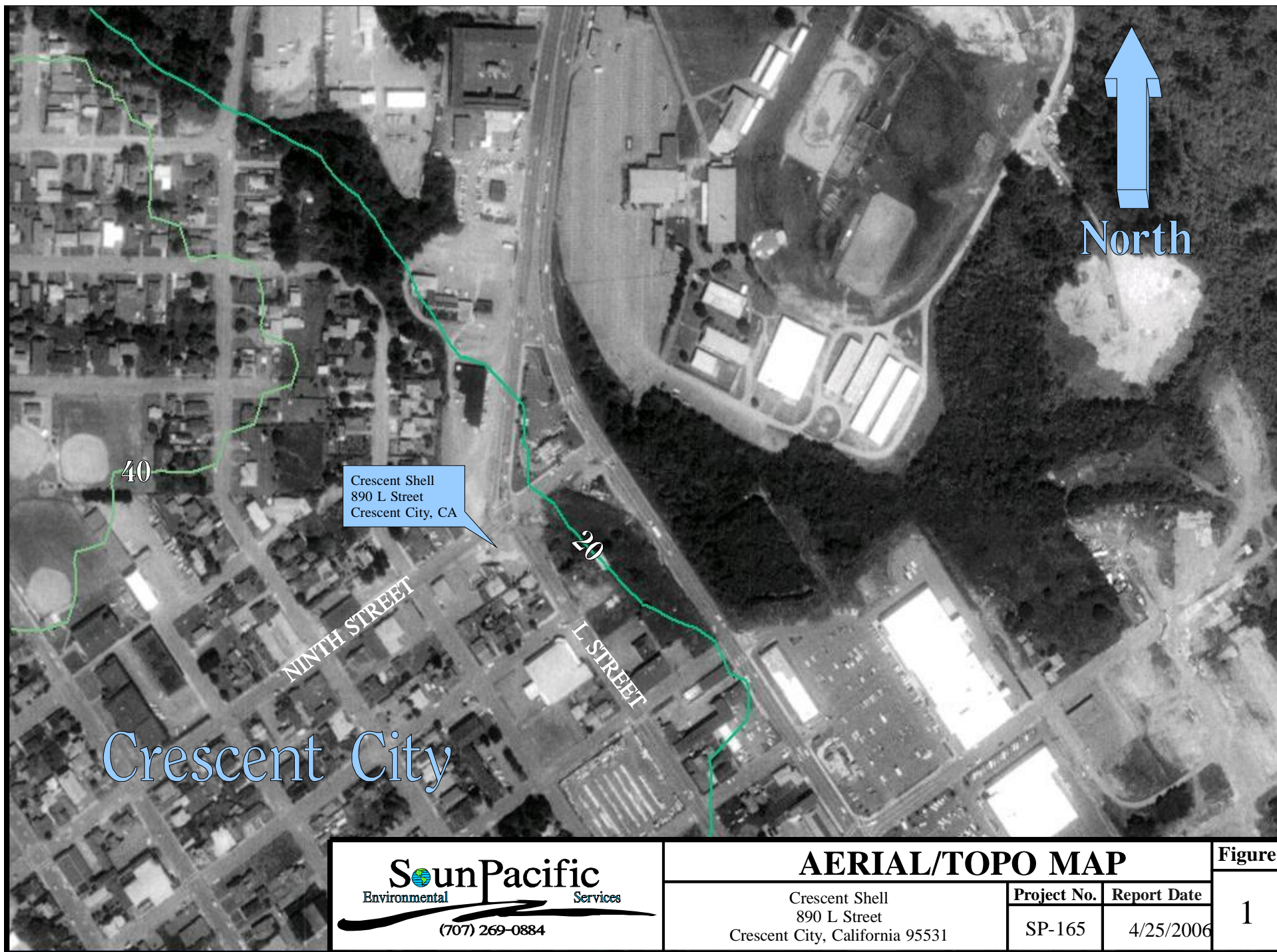
ppb: parts per billion = $\mu\text{g/l} = 1,000 \text{ mg/l} = 0.001 \text{ ppm}$.


ND: Not detected at or above the method detection limit as shown.

Chart 1
Monthly Hydrograph
Crescent Shell
890 L Street
Crescent City, California 95531



Figures



<div><p>Soun Pacific Environmental Services (707) 269-0884</p></div>	AERIAL/TOPO MAP			Figure
	Crescent Shell 890 L Street Crescent City, California 95531	Project No.	Report Date	1
		SP-165	4/25/2006	



NORTH

L STREET

Sign

MW-4

Sign

MW-5

W

MW-6

Traffic Pole

← PL

MW-2

Previous Pump Islands

Storm Drain

Storm Drain

MW-1

Previously Removed 4,000-gallon Unleaded Gasoline UST

(3) Previously Removed 5,000-gallon
Unleaded Gasoline USTs

MW-7

Excavation Limits

RESIDENTIAL PROPERTIES

NINTH STREET

T

T Sign

Power Pole

W S

Sign

T

T

Poles

Gas Valve

Propane Tank

SKAGG'S AUTO REPAIR

LEGEND



Monitoring Well

T

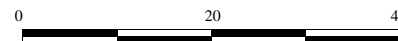
Traffic Control Box

S

Sewer Valve

W

Water Valve



APPROXIMATE SCALE IN FEET

SITE PLAN

Figure

Crescent Shell
890 L Street
Crescent City, California 95531

Project No.

Report Date

SP-165

4/25/2006

2





NORTH

L STREET (Highway 101 South)

NINTH STREET

B-33

MW-8

B-35

B-18

B-19

B-20

MW-6 & B-27

MW-4 & B-25

MW-5 & B-26

W

B-17

B-12

B-10

B-14

B-2

MW-2

← PL

B-7

B-9

B-11

B-31

B-15

B-22

T

B-6

B-29

B-21

B-23

T

MW-1

B-1

B-30

B-8

E

B-32

W

S

B-3

B-13

B-16







T

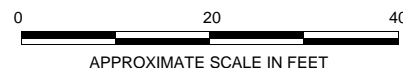
B-4

B-5

MW-7 & B-24

LEGEND

-  Soil Boring drilled 3/95
-  Soil Boring drilled 9/97
-  Soil Boring drilled 4/01
-  Soil Boring drilled 4/03
-  Soil Boring drilled 3/05
-  Monitoring Well



SAMPLE LOCATION MAP

Figure

3



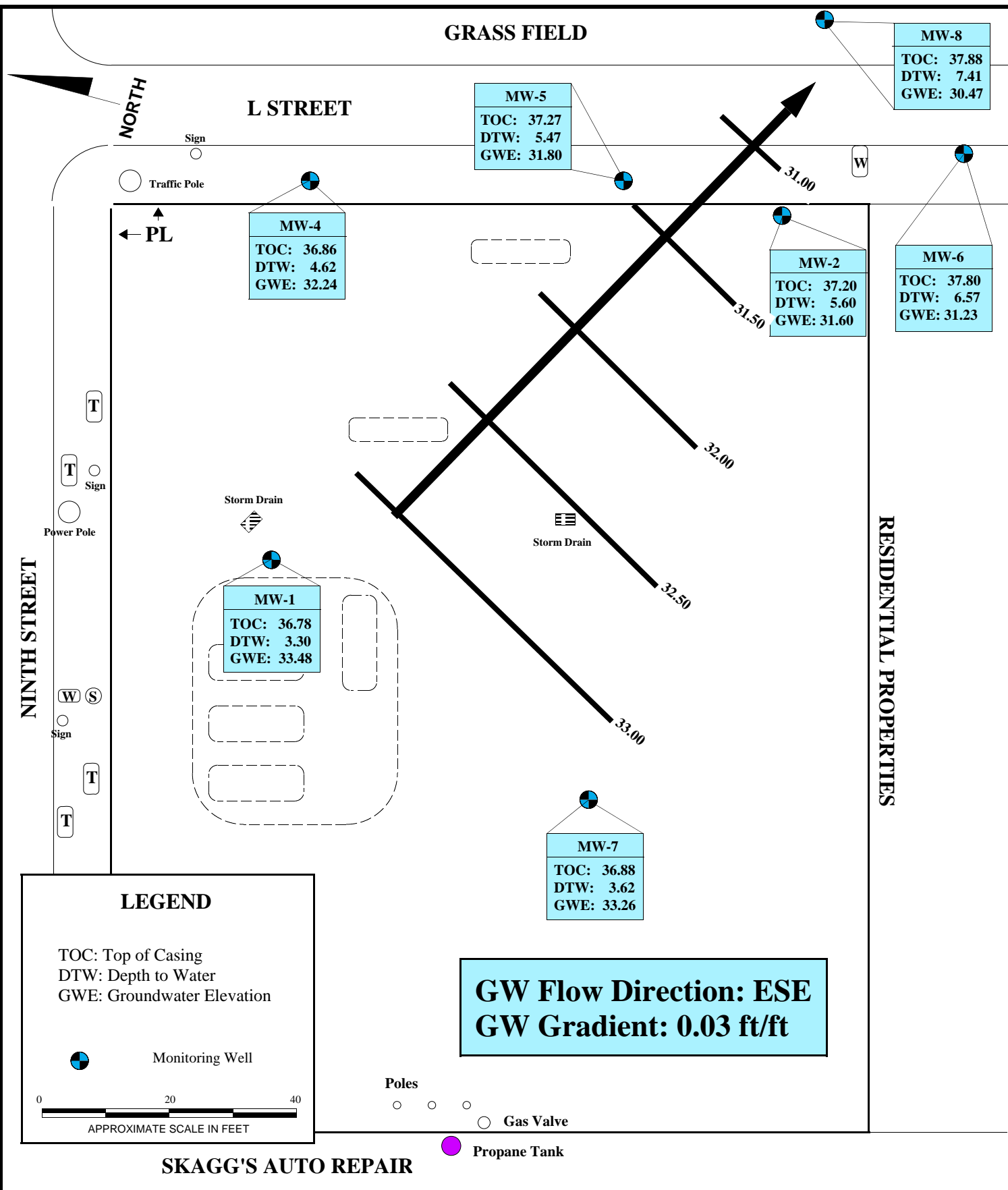
Crescent Shell
890 L Street
Crescent City, California 95531

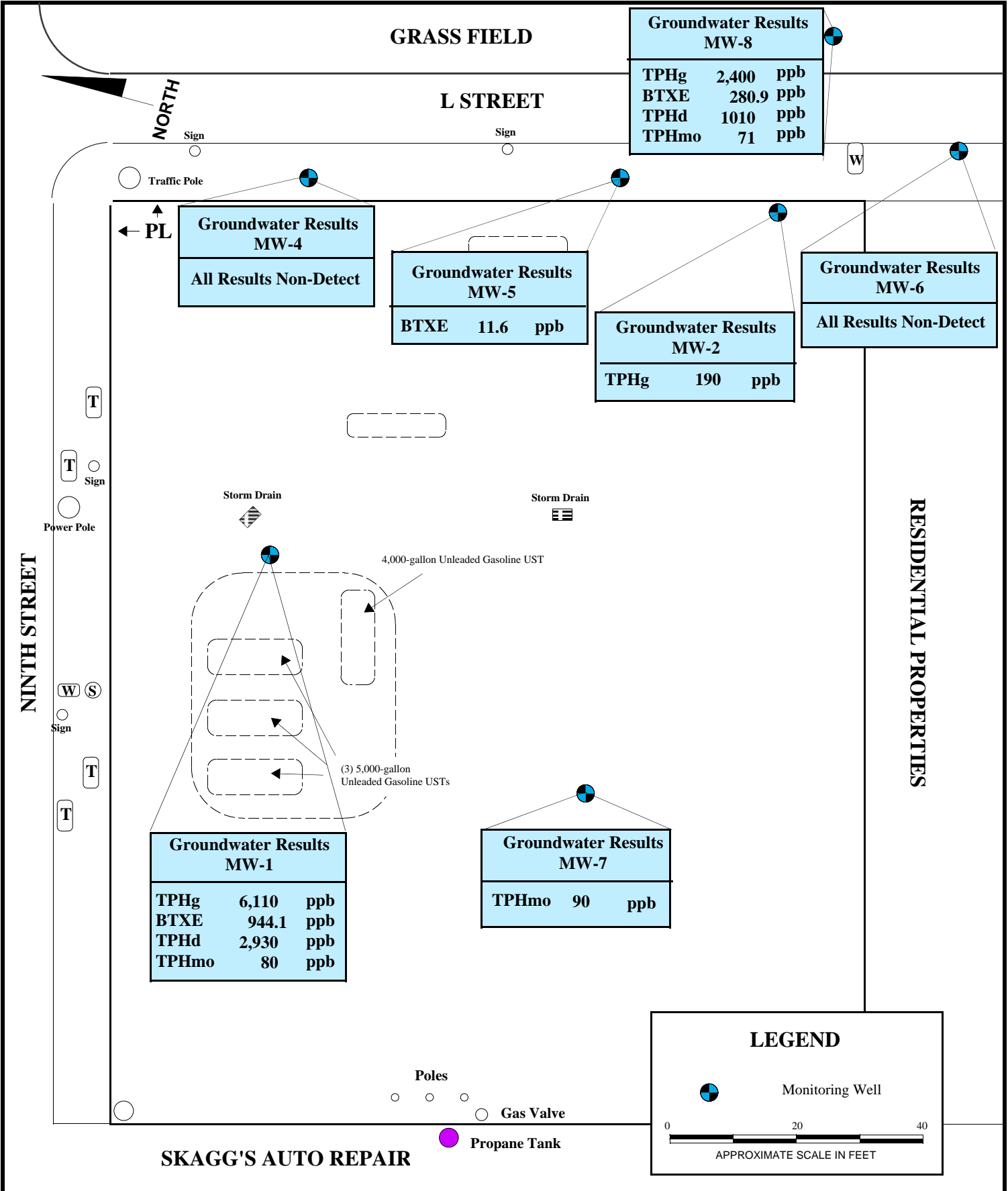
Project No.

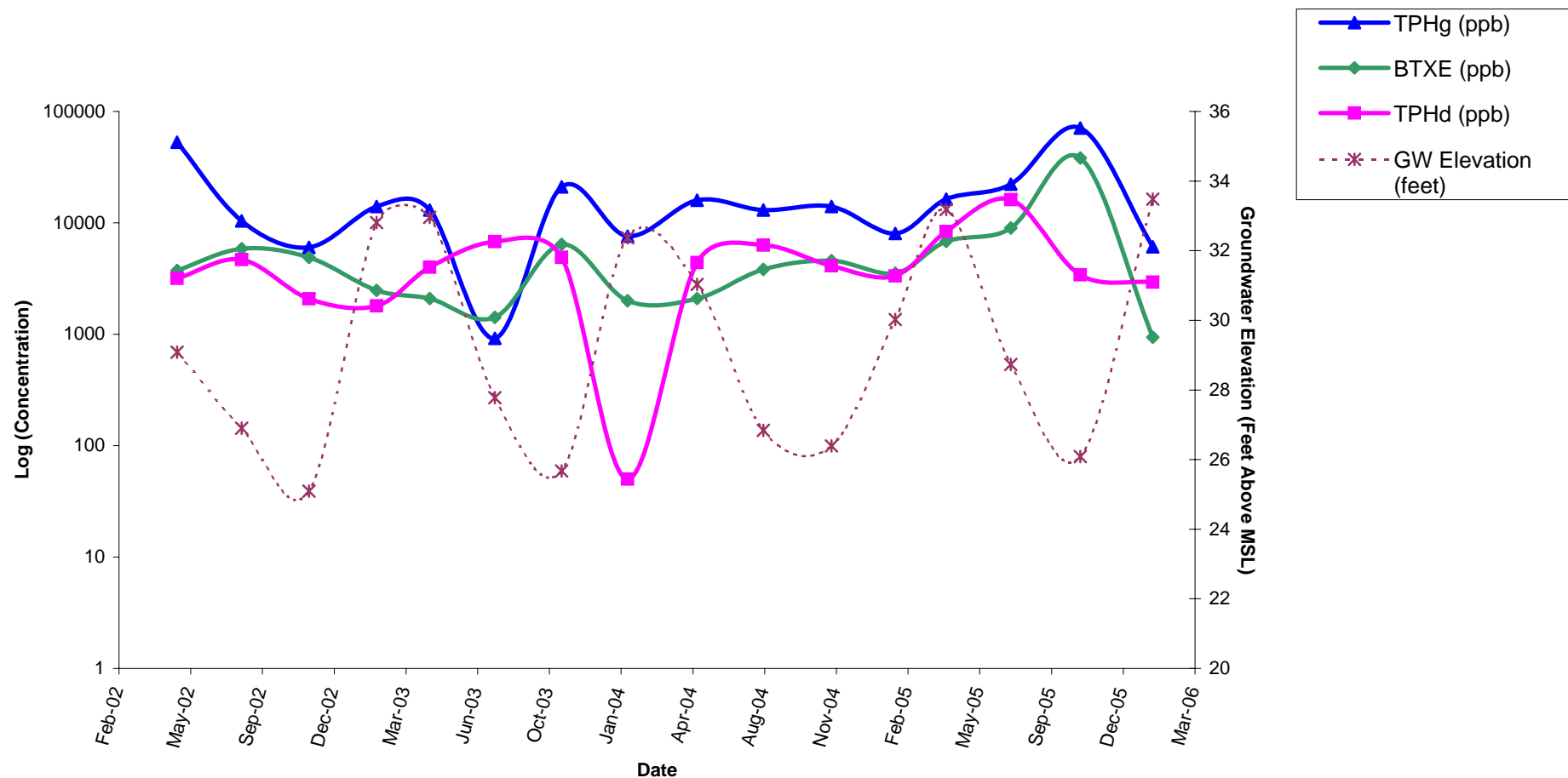
SP-165

Report Date

4/25/2006







MW-1 HYDROCARBON CONCENTRATIONS VS. TIME

Crescent Shell
890 L Street
Crescent City, California 95531

Project No.

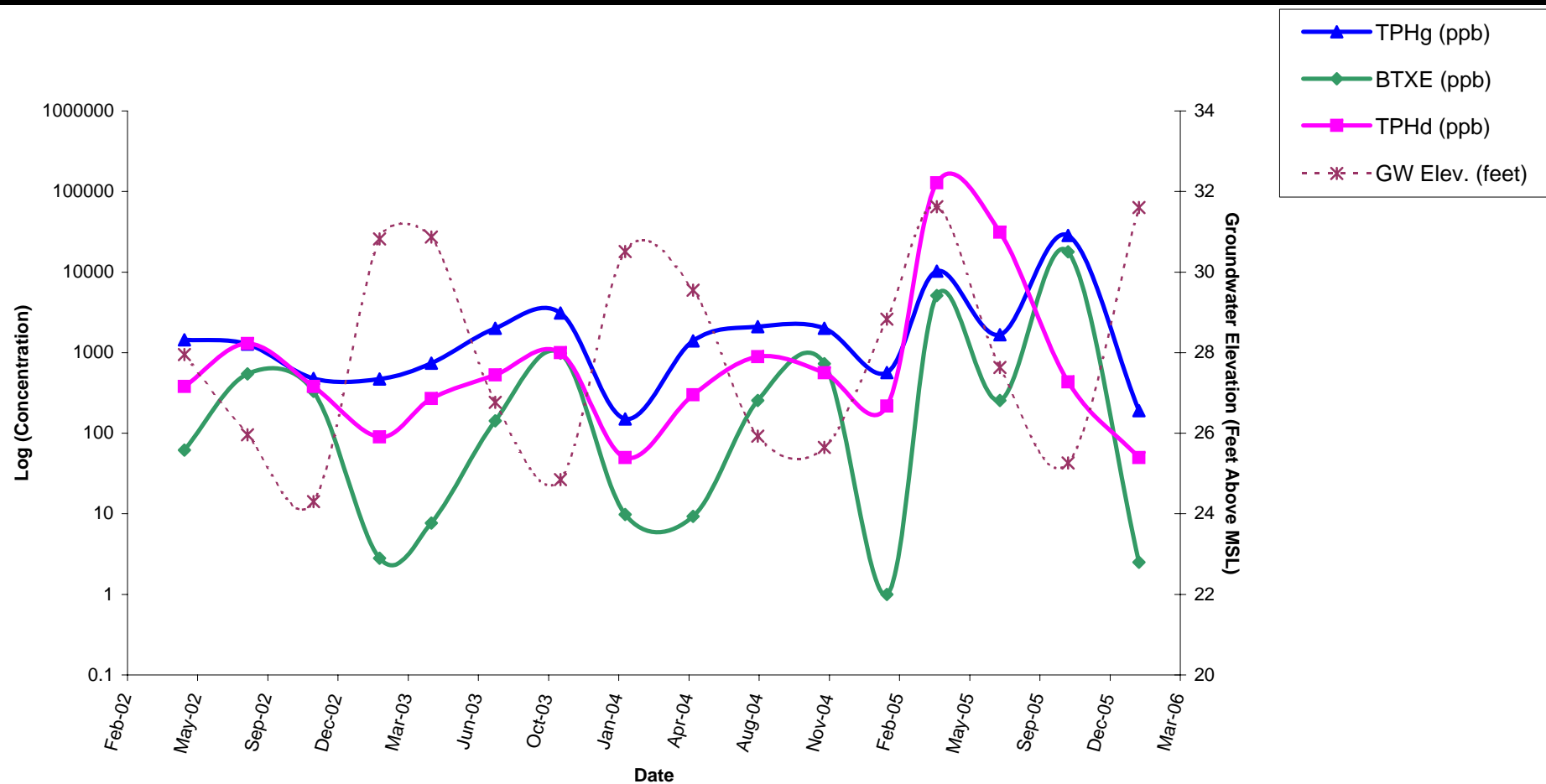
SP-165

Date

4/25/2006

Figure

6



MW-2 HYDROCARBON CONCENTRATIONS VS. TIME

Crescent Shell
 890 L Street
 Crescent City, California 95531

Project No.

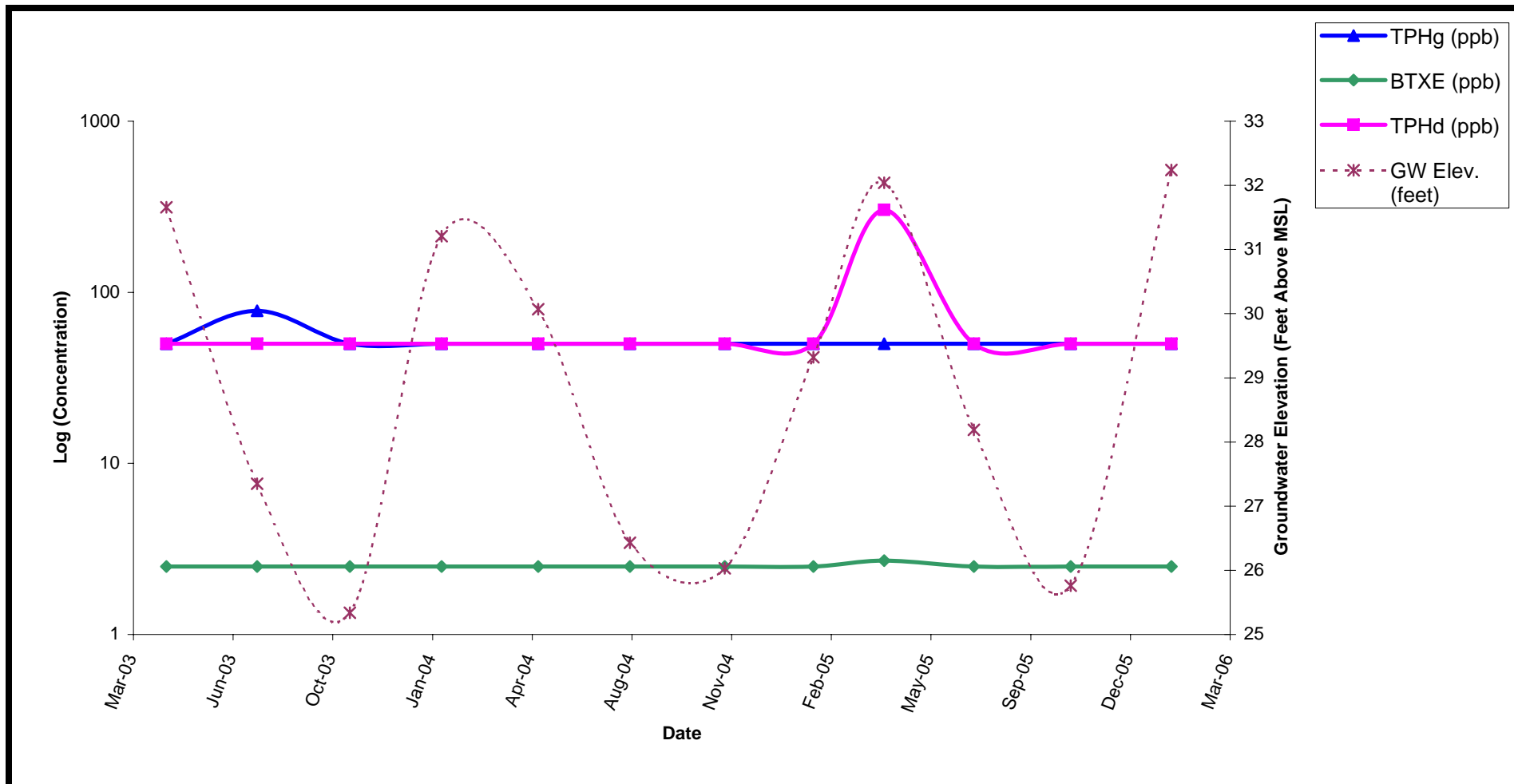
SP-165

Date

4/25/2006

Figure

7



**MW-4 HYDROCARBON
 CONCENTRATIONS VS. TIME**

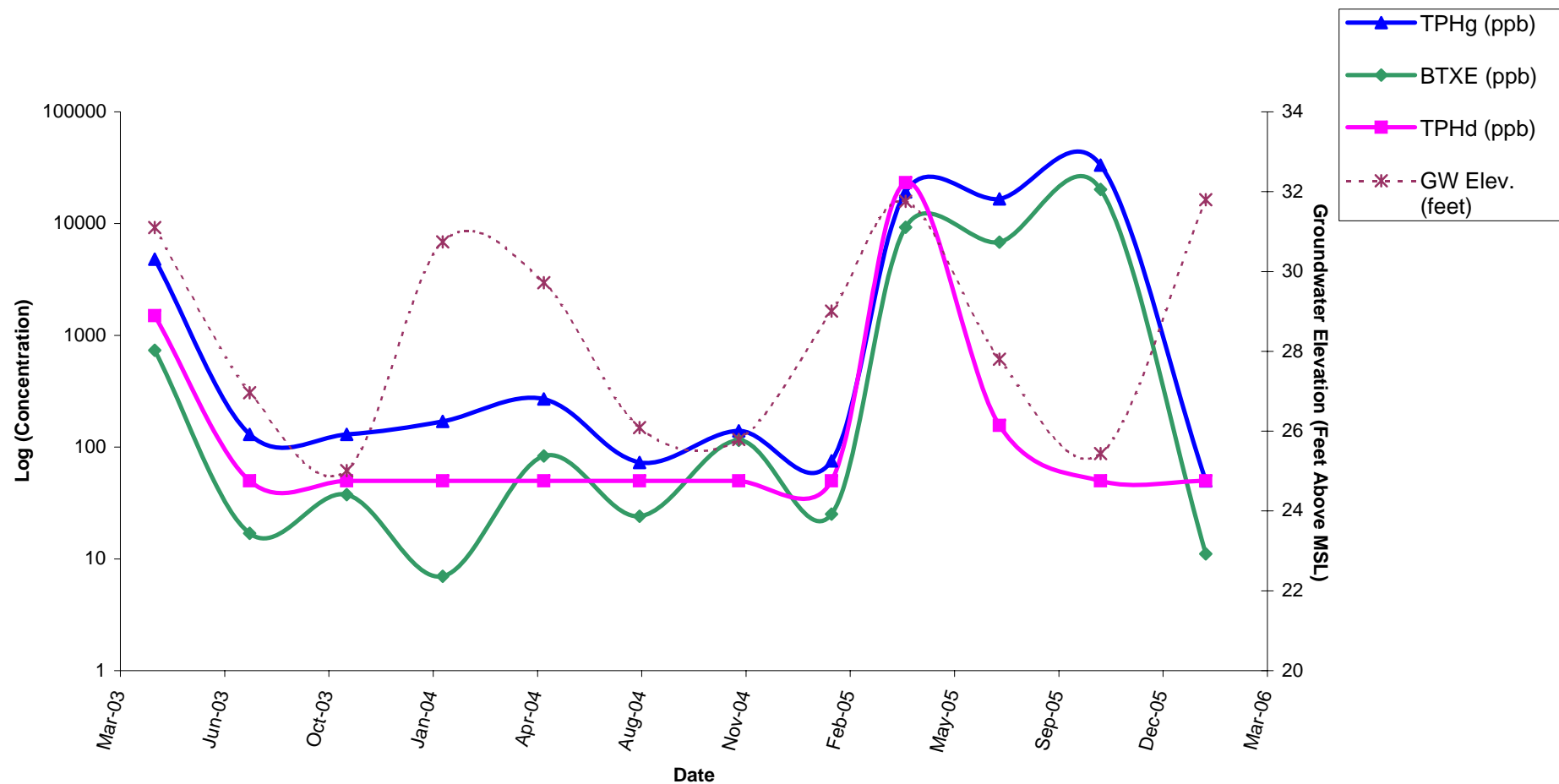
Crescent Shell
 890 L Street
 Crescent City, California 95531

Project No.
 SP-165

Date
 4/25/2006

Figure

8



**MW-5 HYDROCARBON
 CONCENTRATIONS VS. TIME**

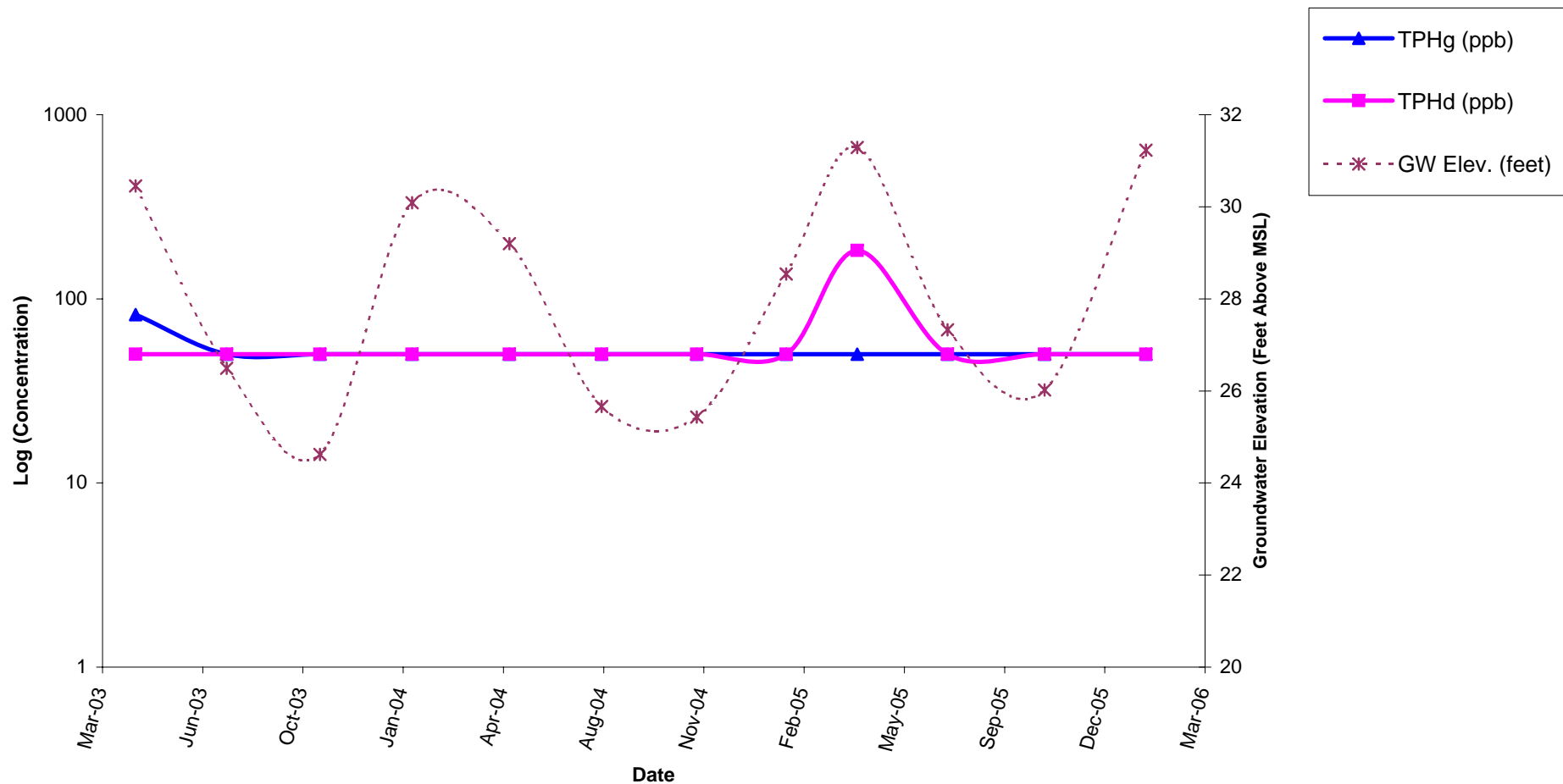
Crescent Shell
 890 L Street
 Crescent City, California 95531

Project No.
 SP-165

Date
 4/25/2006

Figure

9



MW-6 HYDROCARBON CONCENTRATIONS VS. TIME

Crescent Shell
890 L Street
Crescent City, California 95531

Project No.

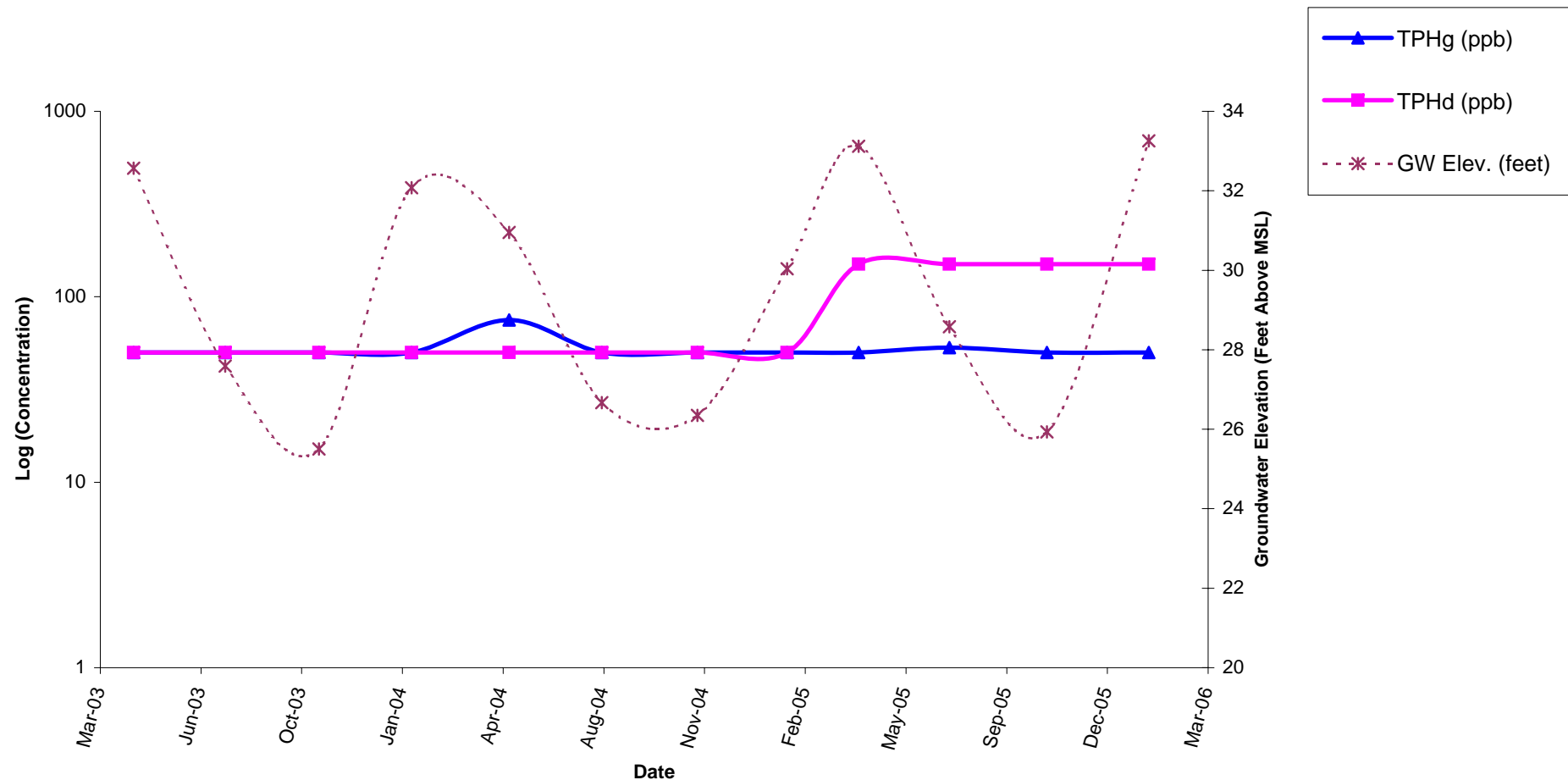
SP-165

Date

4/25/2006

Figure

10



MW-7 HYDROCARBON CONCENTRATIONS VS. TIME

Crescent Shell
890 L Street
Crescent City, California 95531

Project No.

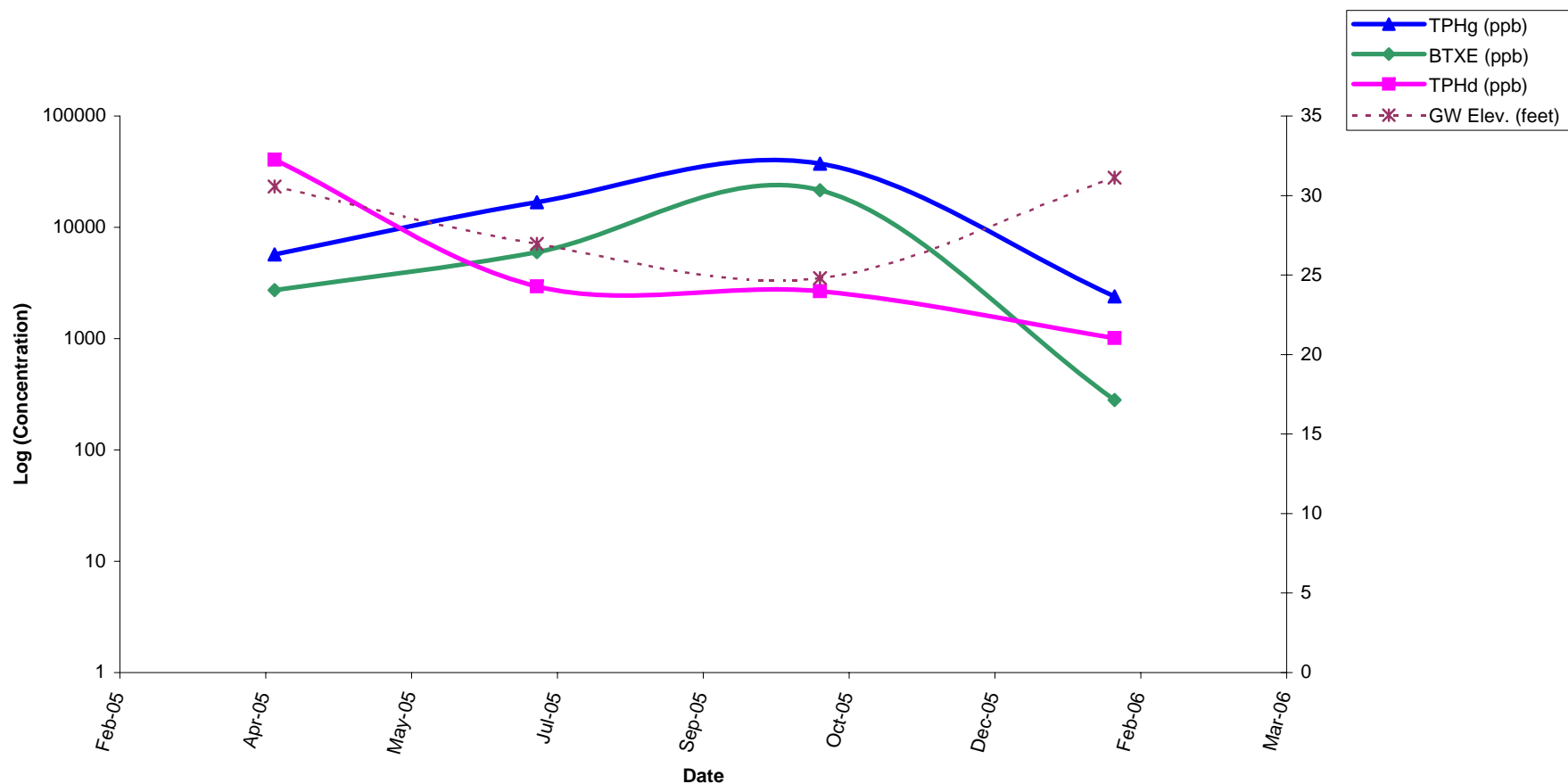
SP-165

Date

4/25/2006

Figure

11



**MW-8 HYDROCARBON
 CONCENTRATIONS VS. TIME**

Crescent Shell
 890 L Street
 Crescent City, California 95531

Project No.
 SP-165

Date
 4/25/2006

Figure

12

Appendices

Appendix A



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voice 530.243.7234 2218 Railroad Avenue
fax 530.243.7494 Redding, California 96001

February 08, 2006

Lab ID: 6010790

Tien-yu Tai
SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549
RE: CRESCENT SHELL SP-165

Dear Tien-yu Tai,

Enclosed are the analysis results for Work Order number 6010790. All analysis were performed under strict adherence to our established Quality Assurance Plan. Any abnormalities are listed in the qualifier section of this report.

If you have any questions regarding these results, please feel free to contact us at any time. We appreciate the opportunity to service your environmental testing needs.

Sincerely,

Ricky Jensen
For

Ricky Jensen
Ricky D. Jensen
Laboratory Director
California ELAP Certification Number 1677



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voice 530.243.7234 2218 Railroad Avenue
fax 530.243.7494 Redding, California 96001

Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549

Attention: Tien-yu Tai

Project: CRESCENT SHELL SP-165

Lab No: 6010790
Reported: 02/08/06
Phone: 707-269-0884
P.O. #

Volatile Organic Compounds

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
MW-1 Water (6010790-01) Sampled:01/24/06 00:00 Received:01/30/06 10:54									
Gasoline	ug/l	6110	R-07		400	EPA 8015/8260	01/30/06	01/30/06	B6A0667
Benzene	"	5.8	R-07		4.0	"	"	"	"
Toluene	"	ND	R-07		4.0	"	"	"	"
Ethylbenzene	"	916	R-01, R-07		100	"	01/30/06	"	"
Xylenes (total)	"	18.3	R-07		8.0	"	01/30/06	"	"
Methyl tert-butyl ether	"	ND	R-07		8.0	"	"	"	"
Di-isopropyl ether	"	ND	R-07		4.0	"	"	"	"
Tert-amyl methyl ether	"	ND	R-07		4.0	"	"	"	"
Ethyl tert-butyl ether	"	ND	R-07		4.0	"	"	"	"
Tert-butyl alcohol	"	ND	R-07		400	"	"	"	"
Surrogate: 4-Bromofluorobenzene		117 %		43-155		"	"	"	"
MW-2 Water (6010790-02) Sampled:01/24/06 00:00 Received:01/30/06 10:54									
Gasoline	ug/l	190			50.0	EPA 8015/8260	01/30/06	01/30/06	B6A0667
Benzene	"	ND			0.5	"	"	"	"
Toluene	"	ND			0.5	"	"	"	"
Ethylbenzene	"	ND			0.5	"	"	"	"
Xylenes (total)	"	ND			1.0	"	"	"	"
Methyl tert-butyl ether	"	ND			1.0	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	ND			0.5	"	"	"	"
Ethyl tert-butyl ether	"	ND			0.5	"	"	"	"
Tert-butyl alcohol	"	ND			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		105 %		43-155		"	"	"	"
MW-4 Water (6010790-03) Sampled:01/24/06 00:00 Received:01/30/06 10:54									
Gasoline	ug/l	ND			50.0	EPA 8015/8260	01/30/06	01/30/06	B6A0667
Benzene	"	ND			0.5	"	"	"	"
Toluene	"	ND			0.5	"	"	"	"
Ethylbenzene	"	ND			0.5	"	"	"	"
Xylenes (total)	"	ND			1.0	"	"	"	"
Methyl tert-butyl ether	"	ND			1.0	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	ND			0.5	"	"	"	"
Ethyl tert-butyl ether	"	ND			0.5	"	"	"	"
Tert-butyl alcohol	"	ND			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		93.0 %		43-155		"	"	"	"
MW-5 Water (6010790-04) Sampled:01/24/06 00:00 Received:01/30/06 10:54									
Gasoline	ug/l	ND			50.0	EPA 8015/8260	01/30/06	01/30/06	B6A0667
Benzene	"	1.8			0.5	"	"	"	"
Toluene	"	ND			0.5	"	"	"	"
Ethylbenzene	"	2.9			0.5	"	"	"	"
Xylenes (total)	"	6.4			1.0	"	"	"	"
Methyl tert-butyl ether	"	ND			1.0	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	ND			0.5	"	"	"	"
Ethyl tert-butyl ether	"	ND			0.5	"	"	"	"
Tert-butyl alcohol	"	ND			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		99.6 %		43-155		"	"	"	"
MW-6 Water (6010790-05) Sampled:01/24/06 00:00 Received:01/30/06 10:54									
Gasoline	ug/l	ND			50.0	EPA 8015/8260	01/30/06	01/30/06	B6A0667
Benzene	"	ND			0.5	"	"	"	"
Toluene	"	ND			0.5	"	"	"	"



Approved By

Basic Laboratory, Inc.
California D.O.H.S. Cert #1677



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fax 530.243.7494 Redding, California 96001

Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549

Attention: Tien-yu Tai

Project: CRESCENT SHELL SP-165

Lab No: 6010790
Reported: 02/08/06
Phone: 707-269-0884
P.O. #

Volatile Organic Compounds

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
MW-6 Water (6010790-05) Sampled:01/24/06 00:00 Received:01/30/06 10:54									
Ethylbenzene	"	ND			0.5	"	"	01/30/06	"
Xylenes (total)	"	ND			1.0	"	"	"	"
Methyl tert-butyl ether	"	ND			1.0	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	ND			0.5	"	"	"	"
Ethyl tert-butyl ether	"	ND			0.5	"	"	"	"
Tert-butyl alcohol	"	ND			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		89.6 %		43-155		"	"	"	"
MW-7 Water (6010790-06) Sampled:01/24/06 00:00 Received:01/30/06 10:54									
Gasoline	ug/l	ND			50.0	EPA 8015/8260	01/30/06	01/30/06	B6A0667
Benzene	"	ND			0.5	"	"	"	"
Toluene	"	ND			0.5	"	"	"	"
Ethylbenzene	"	ND			0.5	"	"	"	"
Xylenes (total)	"	ND			1.0	"	"	"	"
Methyl tert-butyl ether	"	ND			1.0	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	ND			0.5	"	"	"	"
Ethyl tert-butyl ether	"	ND			0.5	"	"	"	"
Tert-butyl alcohol	"	ND			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		90.4 %		43-155		"	"	"	"
MW-8 Water (6010790-07) Sampled:01/24/06 00:00 Received:01/30/06 10:54									
Gasoline	ug/l	2400			50.0	EPA 8015/8260	01/30/06	01/30/06	B6A0667
Benzene	"	80.3			0.5	"	"	"	"
Toluene	"	2.4			0.5	"	"	"	"
Ethylbenzene	"	143	R-01		50.0	"	01/30/06	"	"
Xylenes (total)	"	55.2			1.0	"	01/30/06	"	"
Methyl tert-butyl ether	"	ND			1.0	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	ND			0.5	"	"	"	"
Ethyl tert-butyl ether	"	ND			0.5	"	"	"	"
Tert-butyl alcohol	"	ND			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		107 %		43-155		"	"	"	"


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Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549

Attention: Tien-yu Tai

Project: CRESCENT SHELL SP-165

Lab No: 6010790
Reported: 02/08/06
Phone: 707-269-0884
P.O. #

TPH Diesel & Motor Oil

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
MW-1 Water (6010790-01) Sampled:01/24/06 00:00 Received:01/30/06 10:54									
Diesel	ug/l	2930	D-08		50	EPA 8015 MOD	02/03/06	01/30/06	B6A0647
Motor Oil	"	80			50	"	"	"	"
Surrogate: Octacosane		107 %		50-150		"	"	"	"
MW-2 Water (6010790-02) Sampled:01/24/06 00:00 Received:01/30/06 10:54									
Diesel	ug/l	ND			50	EPA 8015 MOD	02/03/06	01/30/06	B6A0647
Motor Oil	"	ND			50	"	"	"	"
Surrogate: Octacosane		98.9 %		50-150		"	"	"	"
MW-4 Water (6010790-03) Sampled:01/24/06 00:00 Received:01/30/06 10:54									
Diesel	ug/l	ND			50	EPA 8015 MOD	02/03/06	01/30/06	B6A0647
Motor Oil	"	ND			50	"	"	"	"
Surrogate: Octacosane		96.2 %		50-150		"	"	"	"
MW-5 Water (6010790-04) Sampled:01/24/06 00:00 Received:01/30/06 10:54									
Diesel	ug/l	ND			50	EPA 8015 MOD	02/03/06	01/30/06	B6A0647
Motor Oil	"	ND			50	"	"	"	"
Surrogate: Octacosane		99.8 %		50-150		"	"	"	"
MW-6 Water (6010790-05) Sampled:01/24/06 00:00 Received:01/30/06 10:54									
Diesel	ug/l	ND			50	EPA 8015 MOD	02/03/06	01/30/06	B6A0647
Motor Oil	"	ND			50	"	"	"	"
Surrogate: Octacosane		103 %		50-150		"	"	"	"
MW-7 Water (6010790-06) Sampled:01/24/06 00:00 Received:01/30/06 10:54									
Diesel	ug/l	ND			50	EPA 8015 MOD	02/03/06	01/30/06	B6A0647
Motor Oil	"	90			50	"	"	"	"
Surrogate: Octacosane		102 %		50-150		"	"	"	"
MW-8 Water (6010790-07) Sampled:01/24/06 00:00 Received:01/30/06 10:54									
Diesel	ug/l	1010	D-08		50	EPA 8015 MOD	02/03/06	01/30/06	B6A0647
Motor Oil	"	71			50	"	"	"	"
Surrogate: Octacosane		102 %		50-150		"	"	"	"


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Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549

Attention: Tien-yu Tai

Project: CRESCENT SHELL SP-165

Lab No: 6010790
Reported: 02/08/06
Phone: 707-269-0884
P.O. #

Notes and Definitions

R-07	The sample was diluted due to the presence of high levels of target analytes resulting in elevated reporting limits.
R-01	The Reporting Limit and Detection Limit for this analyte have been raised due to necessary sample dilution.
D-08	Results in the diesel organics range are primarily due to overlap from a gasoline range product.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
<	Less than reporting limit
≤	Less than or equal to reporting limit
>	Greater than reporting limit
≥	Greater than or equal to reporting limit
MDL	Method Detection Limit
RL/ML	Minimum Level of Quantitation
MCL/AL	Maximum Contaminant Level/Action Level
mg/kg	Results reported as wet weight
TTLIC	Total Threshold Limit Concentration
STLC	Soluble Threshold Limit Concentration
TCLP	Toxicity Characteristic Leachate Procedure

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Appendix B



Standard Operating Procedures

Groundwater Level Measurements and Free Phase Hydrocarbon Measurements

All SounPacific staff and contractors shall adopt the following procedures any time that groundwater elevations are determined for the purposes of establishing groundwater gradient and direction, and prior to any sampling event.

Wells are to be tested for free phase hydrocarbons (free product) before the first development or sampling of any new well, and in any well that has historically contained free product.

Equipment Checklist

- ☐ Combination water level / free phase hydrocarbon indicator probe (probe)
- ☐ Gauging Data / Purge Calculations Sheet
- ☐ Pencil or Pen/sharpie
- ☐ Disposable Gloves
- ☐ Distilled Water and or know water source on site that is clean
- ☐ Alconox (powder) or Liquinox (liquid) non-phosphate cleaners—do not use soap!
- ☐ Buckets or Tubs for decontamination station
- ☐ Tools necessary to access wells
- ☐ Site Safety Plan
- ☐ This Standard Operating Procedure
- ☐ Notify Job site business that you will be arriving to conduct work.

Procedure

1. Review Site Safety Plan and utilize personal protection appropriate for the contaminants that may be encountered.
2. Access and open all monitoring wells to be measured. Allow wells to equilibrate for approximately 15 minutes before taking any measurements.

3. Decontaminate probe with Alconox or Liquinox solution, and rinse with distilled water.
4. Determine the diameter of the well to be measured and indicate this on the Gauging Data / Purge Calculations Sheet.
5. Words of caution: Please be careful with water level and product meters probes are not attached with high strength material so please make sure to avoid catching the end on anything in the well and make sure not to wind reel to the point that it could pull on the probe. *If product is suspect in a well, go to step 6, if **no** product is suspected go to step 7 below.*
6. **When product is present or suspected:** use the product level meter. Clip the static charge clamp to the side of the well casing. Then lower probe into the well through the product/water interface about one foot if possible. Then slowly raise the probe back up through the product/water interface layer and record the level as the tone changes from solid to broken-record this level in the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTP). Continue to raise the probe up through the product until the tone stops completely-record this level on the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTW). Then go to step 8.
7. **When no product is present or suspected:** If no free product is present, record the depth of the water (to the nearest 0.01 foot) relative to the painted black mark on the top of the well casing. Leave the probe in the well just a hair above the water level to ensure the well as equilibrated. As the well rises, the tone will sound. Make sure no increase in water levels have occurred in over a ten-minute period. Water levels can lower as well as rise. Make sure you note when the level you keep lowering the probe to has remained stable for at least ten minutes. Once this has been accomplished, please record this level in the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTW).
8. Turn off the probe, and use the probe to determine the depth to the bottom of the well relative to the top of the well casing. This is the depth to bottom measurement (DTB).
9. Decontaminate probe and tape by washing in an Alconox/Liquinox solution (***read directions on solution for ratio of water to cleanser***) and use the toothbrush provided to remove any foreign substance from the probe and tape. Then triple rinse probe and tape with clean water and then proceed to take measurements in the next well.
10. If sampling is to occur, proceed to implement SounPacific's Standard Operating Procedure for Monitoring Well Purging and Sampling. If no sampling is to be performed, close and secure all wells and caps.



Standard Operating Procedures

Monitoring Well Purging and Groundwater Sampling

All SounPacific employees and contractors shall adopt the following procedures any time that groundwater samples are to be taken from an existing groundwater monitoring well.

Prior to the implementation of these procedures, the groundwater level **MUST** be measured and the presence of free phase hydrocarbons determined in accordance with SounPacific's Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements.

Equipment Checklist

- ☐ **Gauging Data / Purge Calculations Sheet used for water level determination**
- ☐ Chain of Custody Form
- ☐ pH/ Conductivity / Temperature meter
- ☐ Pencil or Pen
- ☐ Indelible Marker
- ☐ Calculator
- ☐ Disposable Gloves
- ☐ Distilled Water
- ☐ Alconox/liquinox liquid or powdered non-phosphate cleaner
- ☐ Buckets or Tubs for decontamination station
- ☐ Bottom-filling bailer or pumping device for purging
- ☐ Disposable bottom-filling bailer and emptying device for sampling
- ☐ String, twine or fishing line for bailers
- ☐ Sample containers appropriate for intended analytical method (check with lab)
- ☐ Sample labels
- ☐ Site Safety Plan
- ☐ Tools necessary to access wells
- ☐ Drum space on site adequate for sampling event

Procedure

1. Review Site Safety Plan and utilize personal protection appropriate for the contaminants that may be encountered.
2. Measure groundwater levels and check for the presence of free product in accordance with the Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements.

Purging

3. Calculate and record the volume of standing water in each well using the information provided on the Gauging Data / Purge Calculations sheet.
 $(DTB-DTW) \times \text{Conversion Factor} = \text{Casing Volume}$.
4. The purge volume shall be at least three times and no more than seven times the volume of standing water (the casing volume).
5. Purge the well by bailing or pumping water from the well into a calibrated receptacle, such as a five gallon bucket or tub with markings to indicate one gallon increments. Collect purgeate in a 55 gallon labeled drum and store on site. Drum labels should include the date, contents, site number, and SounPacific's name and telephone number.
6. Take measurements of pH, conductivity, temperature, and visual observations to verify the stabilization of these parameters. At least five measurements of these parameters should be made throughout the purging process. The parameters shall be considered stabilized if successive measurements vary by less than 0.25 pH units, 10% of conductivity in μS , and 1°C (or 1.8°F). Continue purging until at least three times the casing volume has been removed, and the measured parameters have stabilized as indicated above. Do not exceed seven casing volumes.
7. Take a final depth to groundwater measurement and calculate the casing volume of the recharged well. Ideally, the casing volume should have recharged to at least 80% of the original measured casing volume before sampling commences. If due to slow recharge rates it is not feasible to wait for the well to fully recharge, then note this on the Gauging Data / Purge Calculation Sheet and proceed to sample following the procedure below.

Sampling

8. **After completing groundwater measurement, and checking for free product if necessary, in accordance with SounPacific's Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements, and after purging monitoring wells as described above, groundwater samples may be collected.**
9. Slowly lower a clean, previously unused disposable bailer into the well water approximately half of the bailer length, and allow the bailer to slowly fill.
10. Withdraw the full bailer from the monitoring well and utilize the included (clean and unused) bottom-emptying device to fill the necessary sample containers, and seal the container with the included PTFE (Teflon) lined cap.
11. When filling VOAs, fill the VOA completely full, with the meniscus rising above the rim of the bottle. Carefully cap the VOA and invert it and gently tap it to determine whether air bubbles are trapped inside. If the VOA contains air bubbles, refill the VOA and repeat this step.
12. All samples shall be labeled with the Sample ID, the Sample Date, and the Sample Location or Project Number. Use an indelible marker for writing on sample labels.
13. Record all pertinent sample data on the Chain of Custody.
14. Place samples in an ice chest cooled to 4°C with ice or "blue ice". Bottles should be wrapped in bubble wrap, and VOA's should be inserted in a foam VOA holder to protect against breakage. Samples are to be kept at 4°C until delivered to the laboratory. Any transference of sample custody shall be indicated on the Chain of Custody with the appropriate signatures as necessary.
15. Utilize clean, previously unused gloves, bailer and line, and bottom-emptying device for each well sampled.
16. When finished with all sampling, close and secure all monitoring wells.
17. Leave the site cleaner than when you arrived and drive safely.

Appendix C

GAUGING DATA/PURGE CALCULATIONS

Job Site: Crescent ShellJob No.: SP-165Event: 15th Quarterly SamplingDate: 1-24-06

WELL NO.	DIA (in.)	DTB (ft.)	DTW (ft.)	ST (ft.)	CV (gal.)	PV (gal.)	SPL (ft.)	Bailer Loads	Notes
MW-1	2	13.4	3.3	10.1	1.6	4.8			Very Strong HC Odor, almost clear
MW-2	2	13.78	5.60	8.18	1.3	3.9			Almost clear
MW-4	2	18.92	4.63	14.3	2.3	6.9			High Turbidity, Muddy at the bottom
MW-5	2	18.77	5.47	13.3	2.1	6.3			Same as MW-4
MW-6	2	18.61	6.57	12.04	1.9	5.7			Same as above
MW-7	2	18.4	3.62	14.78	2.4	7.2			High Turbidity, Muddy near bottom
MW-8	2	14.17	7.4	6.76	1.1	3.3			Strong HC Odor, light turbidity
									MW-1, 2, 5 have low DOs, MW-4, 6, 7, 8 have high DOs

Explanation:

DIA = Well Diameter

DTB = Depth to Bottom

DTW = Depth to Water

ST = Saturated Thickness (DTB-DTW)

CV = Casing Volume (ST x cf)

PV = Purge Volume (standard 3 x CV, well development 10 x CV)

SPL = Thickness of Separate Phase Liquid

Conversion Factors (cf):

2 in. dia. well cf = 0.16 gal./ft.

4 in. dia. well cf = 0.65 gal./ft.

6 in. dia. well cf = 1.44 gal./ft.

Sampler:

Tien-yu Tai

Well Gauging/Sampling Report

Sheet 1 of 7

Date: <u>1-24-06</u>		Project Name: <u>Crescent Shell</u>		Project No: <u>SP-165</u>		Well Number: <u>MW-1</u>	
Analyses Tested: <u>TPHg, BTXE, 5 Oxyg, TPHd, TPHmo</u>							
Sample Containers: <u>3 (upml) HIL VOAs, 2 (1L) Brown Glass Bottles</u>							
Purge Technique:		<input type="checkbox"/> Bailor		<input checked="" type="checkbox"/> Pump			
Sounding Used:		<input type="checkbox"/> Water Meter		<input checked="" type="checkbox"/> Interface Meter			
Water & Free Product Levels							
Time	Depth to Water	Depth to Product	Notes				
<u>11:35 am</u>	<u>3.3</u>		<u>Sheen</u>				
<u>12:00 pm</u>	<u>3.3</u>						
<u>End</u>							
Field Measurements							
Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (ms/cm)	DO (mg/L)	DO (%)	
<u>2:08 pm</u>	<u>0</u>	<u>6.83</u>	<u>57.09</u>	<u>0.554</u>	<u>0.21</u>	<u>2.1</u>	
<u>2:13</u>	<u>1.6</u>	<u>6.80</u>	<u>58.42</u>	<u>0.568</u>	<u>0.16</u>	<u>1.6</u>	
<u>2:17</u>	<u>3.2</u>	<u>6.80</u>	<u>58.55</u>	<u>0.578</u>	<u>0.16</u>	<u>1.6</u>	
<u>2:22</u>	<u>4.8</u>	<u>6.80</u>	<u>58.53</u>	<u>0.578</u>	<u>0.25</u>	<u>2.5</u>	
Field Scientist: <u>Tien-yu Tai</u>							

Well Gauging/Sampling Report

Sheet 2 of 7

Date: <u>1-24-06</u>		Project Name: <u>Crescent Shell</u>		Project No: <u>SP-165</u>		Well Number: <u>MW-2</u>	
Analyses Tested: <u>TPHg, BTEX, 5 Oxyg, TPHd, TPHmo</u>							
Sample Containers: <u>3 (40 ml) HCl Vials, 2 (1L) Brown Glass Bottles</u>							
Purge Technique:		<input type="checkbox"/> Sailer		<input checked="" type="checkbox"/> Pump			
Sounder Used:		<input type="checkbox"/> Water Meter		<input checked="" type="checkbox"/> Interface Meter			
Water & Free Product Levels							
Time	Depth to Water	Depth to Product	Notes:				
<u>11:49am</u>	<u>5.59</u>		<u>No Sheen</u>				
<u>12:11pm</u>	<u>5.60</u>						
<u>End</u>							
Field Measurements							
Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (mc/cm)	DO (mg/L)	DO (%)	
<u>3:39pm</u>	<u>0</u>	<u>6.11</u>	<u>58.38</u>	<u>0.317</u>	<u>0.47</u>	<u>4.7</u>	
<u>3:43</u>	<u>1.3</u>	<u>6.36</u>	<u>59.27</u>	<u>0.258</u>	<u>0.13</u>	<u>1.2</u>	
<u>3:47</u>	<u>2.6</u>	<u>6.38</u>	<u>59.27</u>	<u>0.257</u>	<u>0.16</u>	<u>1.6</u>	
<u>3:52</u>	<u>3.9</u>	<u>6.39</u>	<u>59.35</u>	<u>0.262</u>	<u>0.19</u>	<u>1.9</u>	
Field Scientist: <u>Tien-yu Tai</u>							

Well Gauging/Sampling Report

Sheet 3 of 7

Date: <u>1-24-06</u>		Project Name: <u>Crescent Shell</u>		Project No: <u>SP-165</u>		Well Number: <u>14W-4</u>	
Analyses Tested: <u>TPHg, BTxE, 5 Oxyg, TPHd, TPHmo</u>							
Sample Containers: <u>3 (40ml) HLL VOA's, 2 (1L) Brown Glass Bottles</u>							
Purge Technique:		<input type="checkbox"/> Bailor		<input checked="" type="checkbox"/> Pump			
Sounding Used:		<input type="checkbox"/> Water Meter		<input checked="" type="checkbox"/> Interface Meter			
Water & Free Product Levels							
Time	Depth to Water	Depth to Product	Notes				
11:43 am	4.62 ft		No Sheen				
12:06 pm	4.62						
End							
Field Measurements							
Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (mc/cm)	DO (mg/L)	DO (%)	
2:36 pm	0	6.48	59.78	0.183	5.11	51.2	
2:44	2.3	6.42	60.98	0.186	4.74	48.1	
2:49	4.6	6.40	61.03	0.188	4.70	47.8	
2:53	6.9	6.30	60.80	0.187	4.73	47.9	
Field Scientist: <u>Tien-yu Tai</u>							

Well Gauging/Sampling Report

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Date: <u>1-23-06</u>		Project Name: <u>Crescent Shell</u>		Project No: <u>SP-165</u>		Well Number: <u>MW-5</u>	
Analyses Tested: <u>TPHg, BTXE, 5 Oxy, TPHd, TPHmd</u>							
Sample Containers: <u>3 (40ml) HD VOA's, 2 (1L) Brown Glass Bottles</u>							
Purge Technique:		<input type="checkbox"/> Bailor		<input type="checkbox"/> Pump			
Sonder Used:		<input type="checkbox"/> Water Meter		<input type="checkbox"/> Interface Meter			
Water & Free Product Levels							
Time	Depth to Water	Depth to Product	Notes				
<u>11:46 am</u>	<u>5.47 ft</u>		<u>No Sheen</u>				
<u>12:08 pm</u>	<u>5.47</u>		<u>.1</u>				
<u>End</u>							
Field Measurements							
Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (mc/cm)	DO (mg/L)	DO (%)	
<u>3:09 pm</u>	<u>0</u>	<u>6.39</u>	<u>59.09</u>	<u>0.162</u>	<u>1.51</u>	<u>15.0</u>	
<u>3:16</u>	<u>2.1</u>	<u>6.34</u>	<u>59.94</u>	<u>0.171</u>	<u>1.00</u>	<u>10.1</u>	
<u>3:20</u>	<u>4.2</u>	<u>6.34</u>	<u>60.07</u>	<u>0.178</u>	<u>1.09</u>	<u>11.0</u>	
<u>3:24</u>	<u>6.3</u>	<u>6.32</u>	<u>60.13</u>	<u>0.183</u>	<u>0.98</u>	<u>9.9</u>	
Field Scientist: <u>Tien-yu Tai</u>							

Well Gauging/Sampling Report

Sheet 6 of 7

Date: <u>1-24-06</u>		Project Name: <u>Crescent Shell</u>		Project No: <u>SP-165</u>		Well Number: <u>MW-7</u>	
Analytes Tested: <u>TPHg, BTxE, 5-Oxys, TPHd, TPHmd</u>							
Sample Containers: <u>3 (400ml) HDL VOAS, 2 (1L) Brown Glass Bottles</u>							
Purge Technique:		<input type="checkbox"/> Bailor		<input checked="" type="checkbox"/> Pump			
Sounder Used:		<input type="checkbox"/> Water Meter		<input checked="" type="checkbox"/> Interface Meter			
Water & Free Product Levels							
Time	Depth to Water	Depth to Product	Notes				
<u>11:39 am</u>	<u>3.63 ft</u>		<u>Sheen</u>				
<u>12:02 pm</u>	<u>3.62 ft</u>		<u>✓</u>				
<u>End</u>							
Field Measurements							
Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (µm/cm)	DO (mg/L)	DO (%)	
<u>1:34 pm</u>	<u>0</u>	<u>6.12</u>	<u>54.66</u>	<u>0.154</u>	<u>7.90</u>	<u>74.3</u>	
<u>1:39</u>	<u>2.4</u>	<u>6.17</u>	<u>55.52</u>	<u>0.166</u>	<u>7.86</u>	<u>74.7</u>	
<u>1:45</u>	<u>4.8</u>	<u>6.20</u>	<u>56.00</u>	<u>0.173</u>	<u>7.45</u>	<u>71.2</u>	
<u>1:49</u>	<u>7.2</u>	<u>6.20</u>	<u>55.82</u>	<u>0.163</u>	<u>8.12</u>	<u>77.5</u>	
Field Scientist: <u>Tien-yu Tai</u>							

Well Gauging/Sampling Report

Sheet 7 of 7

Date: <u>1-24-06</u>		Project Name: <u>Crescent Shell</u>		Project No: <u>SP-165</u>		Well Number: <u>MW-8</u>	
Analyses Tested: <u>TPHg, BTEX, 5-Oxys, TPHd, TPHmo</u>							
Sample Containers: <u>3 (40ml) HPL Vials, 2 (1L) Brown Glass Bottles</u>							
Purge Technique:		<input type="checkbox"/> Bailor		<input checked="" type="checkbox"/> Pump			
Sounder Used:		<input type="checkbox"/> Water Meter		<input checked="" type="checkbox"/> Interface Meter			
Water & Free Product Levels							
Time	Depth to Water	Depth to Product	Notes				
<u>11:56am</u>	<u>7.41</u>		<u>Sheen</u>				
<u>12:15pm</u>	<u>7.41</u>		<u>..</u>				
<u>End</u>							
Field Measurements							
Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (mc/cm)	DO (mg/L)	DO (%)	
<u>1:09pm</u>	<u>0</u>	<u>6.24</u>	<u>58.40</u>	<u>0.229</u>	<u>6.37</u>	<u>62.7</u>	
<u>1:14</u>	<u>1.1</u>	<u>6.43</u>	<u>58.09</u>	<u>0.284</u>	<u>4.21</u>	<u>41.3</u>	
<u>1:17</u>	<u>2.2</u>	<u>6.33</u>	<u>58.03</u>	<u>0.262</u>	<u>4.74</u>	<u>46.5</u>	
<u>1:20</u>	<u>3.3</u>	<u>6.36</u>	<u>58.14</u>	<u>0.296</u>	<u>4.33</u>	<u>42.5</u>	
Field Scientist: <u>Tien-yu Tai</u>							